DIGIPEN INSTITUTE OF TECHNOLOGY

COURSE CATALOG

2026–2027

Published August 2025

Table of Contents

Notices

Degree Exemption

In accordance with the Degree-Granting Institutions Act Regulations (WAC 250-61-060 (3)), institutions that meet certain criteria are eligible for exemption from degree authorization. DigiPen Institute of Technology is considered to be an eligible institution exempted from degree authorization requirements by the Washington Student Achievement Council effective November 1, 2012.

Nonimmigrant Non-Citizen Students

This school is authorized under Federal law to enroll nonimmigrant non-citizen students.

Regulatory and Oversight Agencies

1. Washington Student Achievement Council (WSAC)
2. Accrediting Commission of Career Schools and Colleges (ACCSC)
3. Accreditation Board for Engineering and Technology (ABET)
4. Bureau for Private Postsecondary Education (BPPE)
5. U.S. Department of Education

Accreditation

DigiPen Institute of Technology is accredited by the Accrediting Commission of Career Schools and Colleges (ACCSC), a recognized accrediting agency by the U.S. Department of Education.

DigiPen Institute of Technology Singapore and DigiPen Institute of Technology Europe-Bilbao are both accredited by ACCSC as branch campuses of DigiPen Institute of Technology located in Redmond, Washington.

The Bachelor of Science in Computer Engineering program was accredited by the Engineering Accreditation Commission of ABET, www.abet.org, from October 1, 2012 to September 30, 2025.

The Bachelor of Science in Computer Science in Real- Time Interactive Simulation program is accredited by the Computing Accreditation Commission of ABET, www.abet.org. This accreditation action extends retroactively from October 1, 2015.

Copyright Notice

Trademarks

Important Notices

All items including, but not limited to, application forms, transcripts, reference letters, resumes, software, and any accompanying documentation or works of art (collectively “the Items”), forwarded to DigiPen by any person (the “Sender”) whether at the request of DigiPen or otherwise, become the exclusive property of DigiPen unless otherwise agreed to in writing by DigiPen, and the Institute* shall be under no obligation whatsoever to return the Items to the Sender. At DigiPen’s discretion, the Items may be destroyed after being reviewed.

DigiPen Institute of Technology reserves the right to make changes to the curricula, calendar, program delivery method, and/or Course Catalog without any prior notice.

The course offerings and requirements of DigiPen Institute of Technology are under continual examination and revision. The most recent edition of the Course Catalog supersedes any previous edition of the Course Catalog published for the same academic year. This catalog is not a contract; it merely presents the offerings and requirements in effect at the time of publication and in no way guarantees that the offerings and requirements will not change. The Institute specifically reserves the right to change requirements for any major during any particular year. The individual student assumes full responsibility for compliance with all current academic requirements. Current course offerings may be obtained from the Office of the Registrar. Current major and degree requirements may also be obtained from the Office of the Registrar. For the most current information, visit DigiPen’s official Course Catalog online at digipen.edu/academics/course-catalog.

**Please note that "Institute" and "DigiPen" refer to "DigiPen Institute of Technology" when used in the Course Catalog.*

Notice of Non-Discrimination

DigiPen Institute of Technology is committed to maintaining a diverse community in an atmosphere of mutual respect for and appreciation of differences.

DigiPen Institute of Technology does not discriminate in its educational and employment policies on the basis of race, color, creed, religion, national/ethnic origin, sex, gender, gender identity, gender expression, sexual orientation, age, or with regard to the basis outlined in the Veterans' Readjustment Act and the Americans with Disabilities Act, as amended.

General Information

Name of School & Contact Information

DigiPen Institute of Technology
9931 Willows Road NE
Redmond, WA 98052
USA
Telephone: (886) 478-5236 or (425) 558-0299
Facsimile: (425) 558-0378
Email: info@digipen.edu
Web: www.digipen.edu

Department Contacts

Accounting
accounting@digipen.edu

Admissions
admissions@digipen.edu

Career Services
careerservices@digipen.edu

Counseling Services
counseling@digipen.edu

Disability Support Services
dss@digipen.edu

International Affairs & Study Abroad
dso@digipen.edu
studyabroad@digipen.edu

Financial Aid
faid@digipen.edu

Registrar
registrar.us@digipen.edu

Student Affairs
studentaffairs@digipen.edu

Student Success
studentsuccess@digipen.edu

Campus List

Main Campus
DigiPen Institute of Technology
9931 Willows Road NE
Redmond, WA 98052
USA

Branch Campuses
DigiPen Institute of Technology Singapore
1 Punggol Coast Road
Singapore 828608

DigiPen Institute of Technology Europe-Bilbao
Mission – Ribera de Zorrozaurre, 2
48014
Bilbao (Bizkaia), Spain

Programs of Study Offered

Currently, the Institute offers the following degree programs:

- Bachelor of Science in Computer Science in Real-Time Interactive Simulation
- Bachelor of Science in Computer Science and Game Design
- Bachelor of Science in Computer Science and Digital Audio
- Bachelor of Science in Computer Science in Artificial Intelligence
- Bachelor of Science in Computer Science
- Bachelor of Fine Arts in Digital Art and Animation
- Bachelor of Arts in Game Design
- Bachelor of Arts in Music and Sound Design
- Master of Science in Computer Science
- Master of Fine Arts in Digital Arts

Institutional Mission

DigiPen Institute of Technology provides exemplary education and furthers research and innovation in science, engineering, arts, digital media, and interactive computer technologies. Building on a foundation of academics, applied learning, industry knowledge, and multi-disciplinary team-based collaboration, we inspire our students to pursue lifelong learning as well as scientific and creative exploration, and empower them to become leaders and originators on a global level.

Religious Accommodation

DigiPen Institute of Technology provides reasonable accommodations to students who, due to the observance of religious holidays, expect to be absent or endure a significant hardship during certain days of the course or program. These holidays or observances must be part of a religious denomination, church, or religious organization, and the course instructor must be notified in writing during the first two weeks

of the course. If a student feels that their religious accommodation has not been met, they should first discuss the issue with the faculty member(s) involved and then file a course report or incident report.

Accreditation History

DigiPen Institute of Technology is accredited by the Accrediting Commission of Career Schools and Colleges ("ACCSC", or "the Commission"), a recognized accrediting agency by the United States Department of Education.

The Bachelor of Science in Computer Engineering program was accredited by the Engineering Accreditation Commission of ABET, www.abet.org, from October 1, 2012 to September 30, 2025.

The Bachelor of Science in Computer Science in Real-Time Interactive Simulation program (offered at the Redmond campus) is accredited by the Computing Accreditation Commission of ABET, www.abet.org. This accreditation action extends retroactively from October 1, 2015.

Important dates in DigiPen's accreditation history are as follows:

- 2002: DigiPen was granted initial accreditation by ACCSC, including the approval for the Bachelor of Science in Real- Time Interactive Simulation degree program.
- 2002: DigiPen received ACCSC approval for the Bachelor of Fine Arts in Production Animation degree program.
- 2003: DigiPen received ACCSC approval for the Bachelor of Science in Computer Engineering degree program.
- 2005: DigiPen was granted a renewal of accreditation by ACCSC.
- 2006: DigiPen was granted approval for its Master of Science in Computer Science degree program by ACCSC.
- 2008: DigiPen was granted approval for its Bachelor of Arts in Game Design and Bachelor of Science in Game Design degree programs by ACCSC.
- 2010: DigiPen was granted approval for its change of location to its current facility by ACCSC.
- 2010: DigiPen received ACCSC approval allowing DigiPen (Singapore) to disclose in its advertising that it is a branch campus of DigiPen Institute of Technology.
- 2010: DigiPen was granted approval to change the program name from the Bachelor of Fine Arts in Production Animation to the Bachelor of Fine Arts in Digital Art and Animation.
- 2011: DigiPen was granted approval to change the program name from the Bachelor of Science in Real-Time Interactive Simulation to the Bachelor of Science in Computer Science in Real-Time Interactive Simulation.
- 2011: DigiPen (Singapore) was granted accreditation by ACCSC as a branch campus of the main school located in Redmond, Washington, USA.
- 2011: DigiPen was granted approval for its Master of Fine Arts in Digital Arts degree program by ACCSC.
- 2012: DigiPen was granted approval for its Bachelor of Arts in Music and Sound Design and Bachelor of Science in Engineering and Sound Design degree programs by ACCSC.
- 2012: DigiPen was granted approval to change the program name from the Bachelor of Science in Game Design to the Bachelor of Science in Computer Science and Game Design.
- 2014: DigiPen was granted approval for its Bachelor of Science in Computer Science degree program by ACCSC.
- 2015: DigiPen's Bachelor of Science in Computer Engineering program was accredited by the Engineering Accreditation Commission of ABET, www.abet.org.
- 2016: DigiPen was granted approval to change the program name from the Bachelor of Science in Engineering and Sound Design to the Bachelor of Science in Computer Science and Digital Audio.
- 2016: DigiPen was granted approval for its substantive changes to the Master of Fine Arts in Digital Arts program.
- 2017: DigiPen's Bachelor of Science in Computer Science in Real-Time Interactive Simulation program was accredited by the Computing Accreditation Commission of ABET, www.abet.org.
- 2018: DigiPen was granted approval for its Bachelor of Science in Computer Science in Machine Learning degree program by ACCSC.
- 2020: DigiPen was granted approval to offer a portion of degree programs via distance education.
- 2021: DigiPen was granted ACCSC approval for its Master of Arts in Real-Time Visual Effects degree program to be delivered via distance education.
- 2021: DigiPen was granted ACCSC approval for its Master of Science in Computer Science degree program to be delivered via distance education.
- 2022: DigiPen Europe-Bilbao was granted accreditation by ACCSC as a branch campus of the main school located in Redmond, Washington, USA.
- 2025: DigiPen was granted approval to change the program name from the Bachelor of Science in Computer Science in Machine Learning to the Bachelor of Science in Computer Science in Artificial Intelligence for the 2026-2027 catalog year.

Any person desiring information about the accreditation requirements or the applicability of these requirements to the Institute may contact ACCSC by mail at 2101 Wilson Boulevard, Suite 302, Arlington, VA 22201, or by phone at (703) 247-4212. ACCSC's website address is www.accsc.org.

History of DigiPen Institute of Technology

DigiPen was founded in 1988 as a computer simulation and animation company based in Vancouver, British Columbia, Canada. As the demand for production work increased, DigiPen faced difficulty

finding qualified personnel, and in 1990, it began offering a dedicated training program in 3D computer animation to meet this growing need.

That same year, DigiPen approached Nintendo of America to jointly establish a post-secondary program in video game programming. The result of this collaborative effort was the DigiPen Applied Computer Graphics School. In 1994, it officially accepted its first class of video game programming students to its Vancouver campus for the two-year Diploma in the Art and Science of 2D and 3D Video Game Programming. In 1995, DigiPen implemented a revised two-year 3D computer animation program and graduated student cohorts over each of the following four years.

Around this time, the video game industry underwent a paradigm shift from dealing primarily with 2D graphics and gameplay to full 3D worlds that players could freely explore. As these worlds became more sophisticated, so did the task of programming, designing, and animating them. In anticipation of this change, DigiPen developed a four-year bachelor's degree in video game programming (the Bachelor of Science in Computer Science in Real-Time Interactive Simulation) to prepare students for the challenges of creating complex 3D game and simulation software.

In 1996, the Washington State Higher Education Coordinating Board (HECB) granted DigiPen the authorization to award both Associate and Bachelor of Science degrees in Real-Time Interactive Simulation. Two years later, in 1998, DigiPen Institute of Technology opened its campus in Redmond, Washington, USA. In 1999, DigiPen began offering the Associate of Applied Arts in 3D Computer Animation. At this time, DigiPen phased out its educational activities in Canada, moving all operations to its Redmond campus. On July 22, 2000, DigiPen held its first commencement ceremony, where it awarded Associate of Science and Bachelor of Science degrees.

In 2002, DigiPen received accreditation from the Accrediting Commission of Career Schools and Colleges (ACCSC). In 2004, DigiPen began offering three new degrees: the Bachelor of Science in Computer Engineering, the Master of Science in Computer Science*, and the Bachelor of Fine Arts in Digital Art and Animation (previously Bachelor of Fine Arts in Production Animation). In 2008, DigiPen added two more degree programs: the Bachelor of Science in Computer Science and Game Design (previously Bachelor of Science in Game Design) and the Bachelor of Arts in Game Design.

Also in 2008, DigiPen partnered with Singapore's Economic Development Board to open its first international branch campus, offering the following degrees: the Bachelor of Science in Computer Science in Real-Time Interactive Simulation (previously Bachelor of Science in Real-Time Interactive Simulation), the Bachelor of Science in Computer Science and Game Design, the Bachelor of Fine Arts in Digital Art and Animation, and the Bachelor of Arts in Game Design. In 2010, DigiPen announced plans to open its first European campus in Bilbao, Spain.

That same year, DigiPen relocated its U.S. campus to its current location at 9931 Willows Road Northeast in Redmond, Washington.

On September 26, 2011, DigiPen launched DigiPen Institute of Technology Europe-Bilbao, offering two bachelor's degree programs: the Bachelor of Science in Computer Science in Real-Time Interactive Simulation and the Bachelor of Fine Arts in Digital Art and Animation.

On October 11, 2011, DigiPen (Singapore) was granted accreditation by ACCSC as a branch campus of the main school located in Redmond, Washington, USA.

In 2012, DigiPen added three new degree programs: the Bachelor of Arts in Music and Sound Design, the Bachelor of Science in Computer Science and Digital Audio (previously Bachelor of Science in Engineering and Sound Design), and the Master of Fine Arts in Digital Arts.

In 2014, DigiPen added a new degree program: the Bachelor of Science in Computer Science. In that same year, DigiPen (Singapore) received approval for the Bachelor of Engineering (with Honours) in Systems Engineering (ElectroMechanical Systems) degree program.

In 2015, DigiPen's Bachelor of Science in Computer Engineering degree program was accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

In 2015, DigiPen (Singapore) was approved to move from Pixel Building, 10 Central Exchange Green, to SIT@SP Building, 510 Dover Road.

In 2017, DigiPen's Bachelor of Science in Computer Science in Real-Time Interactive Simulation degree program was accredited by the Engineering Accreditation Commission of ABET, abet.org.

In 2018, DigiPen added a new program: the BS in Computer Science in Machine Learning degree program. The first cohort started in Fall 2019.

In 2018, DigiPen (Singapore)'s B.Eng. in Systems Engineering (ElectroMechanical Systems) Program sought the provisional accreditation by the Engineering Accreditation Board (EAB) of IES for a term of three years for students entering the program from Academic Year 2014/2015.

In 2019, DigiPen (Singapore) was granted approval for its two joint degree programs with Singapore Institute of Technology, Bachelor of Science in Computer Science in Real-Time Interactive Simulation and Bachelor of Science in Computer Science in Interactive Media and Game Development. In addition, DigiPen (Singapore) was granted approval for its Master of Science in Computer Vision program.

In 2019, DigiPen (Singapore) was granted approval to change the program name from Bachelor of Arts in Game Design to Bachelor of Arts in User Experience and Game Design.

In 2020, DigiPen (Singapore) was granted approval to change the program name from Bachelor of Engineering in Systems Engineering (ElectroMechanical Systems) to Bachelor of Engineering in Mechatronics Systems.

In 2021, Full accreditation is being sought in the Academic Year 2021/2022 for the Bachelor of Engineering in Mechatronics Systems.

In 2022, DigiPen Europe-Bilbao was granted accreditation by ACCSC as a branch campus of the main school located in Redmond, Washington, USA.

In 2022, DigiPen Europe-Bilbao was granted accreditation by ACCSC Students may attempt a course a total of four times in an effort to earn a passing grade.

In 2022, Engineering Accreditation Board (EAB) of IES agreed to award full accreditation to DigiPen (Singapore)'s (i) Bachelor of Engineering in Systems Engineering (Electromechanical Systems) program at SIT for students graduating from the programme in the academic years 2018/2019, 2019/2020, 2020/2021, 2021/2022, 2022/2023 and 2023/2024 and (ii) Bachelor of Engineering In Mechatronics Systems program at SIT for students graduating from the program in AY2024/2025.

In 2024 DigiPen (Singapore) has received approval from ACCSC on the change of location, which is a two-part move to its new location at Singapore Institute of Technology (SIT) Punggol Campus, as part of the educational partnership with SIT. The original branch campus at 510 Dover Road, Singapore 139660 operated as a satellite location until 30 April 2025.

**DigiPen began offering the MS in Computer Science program in 2004 before ACCSC expanded its scope of recognition by the United States Department of Education to grant approval for master's degree programs. ACCSC granted approval for this degree in 2006.*

Student Right to Know Act and Campus Crime Act Disclosure Notice

In compliance with the Higher Education Act of 1965, as amended, and the Student Right to Know Act, DigiPen is pleased to provide copies of the retention, graduation, and employment rates as well as campus crime reports to prospective and current students upon request. Please send a request to the Office of Admissions (admissions@digipen.edu) or the Office of the Registrar (registrar.us@digipen.edu) to have copies of either report provided.

Text Communications Policy

DigiPen will occasionally send out important announcements via text message. Texts are normally limited to emergency or time sensitive communications. These messages may address topics such as active emergencies, inclement weather, school closures and delays, drills, registration links, vaccination update links, or the like. All students are automatically enrolled into the system upon matriculating to receive emails and texts; however, texts may only reach students if they've provided a domestic cell phone number in the student information system (also known as Colleague Self Service). Steps for updating contact information or opting-out of text or email are included in the Student Handbook.

Youth Programs

DigiPen Institute of Technology offers educational programs* for the non-college community.

Courses are taught at DigiPen's Redmond campus, off-site locations, and some are offered online. Please visit digipen.edu/academics/youth-programs for more information about specific courses offered, cost, admissions information, and registration.

*Youth programs do not fall within the scope of ACCSC accreditation.

Voter Registration

For detailed information about voter registration in Washington state and to download a voter registration form, visit sos.wa.gov/elections/register.aspx.

Vaccination Policy

We encourage students to follow the WA Department of Health recommendation for students prior to attending college. Details about the recommended vaccinations are available at: https://doh.wa.gov/you-and-your-family/immunization/college-students.

DigiPen does not collect proof of vaccinations unless students are living in our DigiPen Housing program. Please refer to the latest DigiPen Housing Agreement for information about current requirements and information: https://www.digipen.edu/campus-life/housing/residential-life#community-policies-and-housing-agreeme...

The State of Washington requires colleges to educate its students about Meningococcal disease and vaccination. Information related to the causes, symptoms, mortality, treatment, and prevention (including vaccination) is available to download from the American College Health Associations website. This information is also provided to every student before moving into DigiPen housing.

U.S. Military Active Duty Policies for Students and U.S. Military Dependents

Withdrawal and Readmission Procedures for Students Called to U.S. Military Active Duty

Withdrawal

Students who are called to active duty should bring a copy of their activation orders and submit the Institutional Withdrawals forms to their Student Success Advisors, who will then review and submit them to the Office of the Registrar.

- If students are called to active military duty before the end of the second week of instruction, no course entries will appear on their transcripts for that semester and they will be eligible for a full tuition refund.
- If students are called to active military duty after the end of the second week of instruction and before the end of the eighth week of instruction, they will receive a “W” for each course enrolled, and they will be eligible for a full tuition refund.
- If students are called to active military duty after the end of the eighth week of instruction, they will receive a “W” for each course enrolled, and they will be eligible for a full tuition refund. Students who have completed a substantial amount of their course work may request an “I” grade. An “I” will revert to a “W” if the student’s active duty period is extended beyond the agreed-upon length of the original agreement.

VA Priority Registration

Students with VA benefits will have priority registration each semester (five days before normal registration starts).

Financial Aid

If students are receiving financial aid during the semester in which they are called to active duty, financial aid must be repaid according to federal and state guidelines before a refund will be issued by DigiPen. The rules regarding financial aid are not necessarily within the control of the Institute. Students should consult with the Office of Financial Aid concerning the impact of military call-up on financial aid conditions and eligibility. The U.S. Department of Education has directed the Direct Loan Program and colleges to provide relief from student loan obligations by postponing student loan payments for borrowers during the period of the borrower’s active duty service.

If a veteran receiving Post 9/11 benefits withdraws before the semester is completed, all funding received from the U.S. Department of Veterans Affairs would be returned to the student, and it is the student’s responsibility to pay any balance owed to DigiPen.

Readmission

IIn compliance with the Higher Education Authorization Act, matriculated/active students who are called to active duty shall be entitled to readmission provided that the student followed the appropriate steps as outlined in the Withdrawal and Readmission Procedures for Students Called to U.S. Military Active Duty section. This is provided that the cumulative length of the absence and of all previous absences from the Institute, by reason of service in the uniformed services, does not exceed five years, and, except as otherwise provided in this section, the student submits a notification of intent to re-enroll in the Institute.

The readmission fee is waived for students returning to DigiPen from United States military active duty.

Withdrawal Procedures for Students Who Are Military Dependents Whose Families Must Move Due to Redeployment/Relocation

Withdrawal

Students who are military dependents and whose families must move due to redeployment or relocation must provide a copy of their family members’ deployment/relocation orders and submit the Institutional Withdrawal forms to their Student Success Advisors, who will then review and submit them to the Office of the Registrar.

- Students who must move before the end of the second week of instruction shall receive no course entry on their transcript and will receive a 100% refund.
- Students who must move after the end of the second week of instruction and before the end of the eighth week of instruction shall receive a “W” for each course enrolled and receive a 100% refund.
- Students who must move after the end of the eighth week of instruction will receive a “W” for each course enrolled and receive a 100% refund.

Financial Aid

Military redeployment/relocation may also affect a student’s financial aid. Military dependents receiving financial aid during the semester in which they are required to move must repay their financial aid according to federal and state guidelines before a refund will be issued by DigiPen. The rules regarding financial aid may not necessarily be within the control of the Institute. Students should consult with the Office of Financial Aid concerning the impact of military redeployment/relocation on financial aid conditions and eligibility.

About DigiPen’s Facilities

DigiPen Institute of Technology’s 150,000 sq. ft. campus features auditoriums, classrooms, and open lab areas with dedicated game production suites, conference rooms, art labs, a music production studio, a ceramics lab, an Academic Support Lab, Student Affairs Offices, a library, staff and faculty offices, a commercial software engineering research and development lab, a game console software development lab, and a professional kitchen and cafeteria.

In August 2020, DigiPen has expanded into non-contiguous space located within the same business complex named Willows Commerce Park of our main campus. The expanded facility is located at 9825 Willows Road, Suite 160, and is approximately 15,559 square feet. The facility is located approximately 200 feet away from our main campus. The expansion houses our Library along with additional student computer lab space, six (6) collaboration rooms, multifunction workspaces, lounge areas, and an additional lecture room. As a result of this facility expansion, DigiPen acquires 30 additional parking spaces within the Willows Commerce Park.

Weekly student access to the DigiPen campus is usually from 6 a.m. to midnight, daily. On certain holidays, lab hours are from 12 p.m. to 8 p.m. Core office hours for the administration staff are from 9 a.m. to 5 p.m., Monday through Friday.

The computer workstations provided at DigiPen are selected to meet or exceed the hardware specifications for required educational software. All computers are on an internal network and have access to printers, servers, and archival media. DigiPen upgrades the computer equipment on a regular basis. Many classrooms are equipped with microphones and either DLP or LCD high-definition projection systems. Presentation materials may be shown on a variety of formats. Specific format concerns or questions will be answered by the IT department.

Classrooms vary in size from a large auditorium accommodating up to 263 students to small classrooms for 12 students. Our two multidisciplinary student game production suites, Edison and Tesla, are 11,000 sq. ft. and 6,500 sq. ft. in respective size and seat 850 in total at workstation table and chair arrangements configured as team spaces. Students specializing as game designers, game programmers, game artists, game musicians, and computer engineers apply and integrate the academic theory from their respective disciplines into projects of varying genres.

Description of the Library Facilities and Internet Access

Library Services

The library serves the information and equipment needs of the Institute's curriculum, students, faculty, and staff. Students have access to a variety of resources such as books, video games, e-books, DVDs, board games, sound effects, and reference books relevant to their program of study. The library also subscribes to a selection of major journals and magazines related to the fields of gaming, simulation, computer engineering, and animation. Furthermore, the DigiPen library allocates an annual budget for updating the contents of the library. The 15,000 square foot library currently holds over 6,500 books, more than 200,000 e-books, over 1,700 videos and video games, a digital collection of more than 100,000 sound effects, and music clips and over 7,000 subscriptions to industry magazines and journals (print and online). The library also loans out computer games, consoles, drawing tablets and other equipment. The librarian provides reference services, information literacy instruction, and materials through inter-library loan. In addition to these curriculum-related resources, the library has a collection of career-oriented materials, including books on resumes, cover letters, and interviews. The library hosts a free book and textbook exchange.

Library hours change from term to term. For current hours, please refer to the library's webpage or contact the library staff by email at library@digipen.edu or by phone at (425) 895-4420.

Internet Access

Internet access is a regulated service and is provided for students free of charge. Students may lose this privilege if they do not abide by the *Student Network and Internet Usage Policy* (see the following section).

Student Network and Internet Usage Policy

General Policies

DigiPen's computer and network resources are provided exclusively for educational purposes. To ensure that these resources remain available for legitimate academic usage, DigiPen requires compliance with the following policies:

- Students are required to respect DigiPen property. Students may not abuse, damage, vandalize, steal, or in any way alter DigiPen property in any manner that would prevent another student from using it.
- Students may not install software, drivers, patches, or any other program on DigiPen computers. Additional software may be requested through an instructor; it is the sole responsibility of DigiPen to decide if, how, and when any software is installed.
- Students are responsible for their own data and are encouraged to protect their work by utilizing the resources provided by DigiPen and by using a personal storage device such as a flash drive or laptop computer.
- Students may not attempt to access another student's information or display any material that may offend another student.
- Students may not copy, publish, or make available any DigiPen property without written consent. This includes, but is not limited to, storing materials on any unauthorized network service or personal server.
- Commercial use of DigiPen computer or network resources is expressly and strictly forbidden. Any commercial activity will result in legal action against the offender.

DigiPen reserves the right to monitor, log, and inspect any data stored on any DigiPen computer or transmitted over the DigiPen network without restriction or limitation in order to ensure compliance with the

above policies. Students found to be in violation of these policies may be restricted from DigiPen's network and subject to disciplinary action.

Internet Filter Policy

Internet access through DigiPen's network is filtered to ensure that students are better able to access information and materials related to their education. All internet traffic from within DigiPen's network, including labs, classrooms, and administrative offices, are sent through a system of proxies, filters, and analyzers to protect school resources from outside disruption, prevent network abuse, and prioritize legitimate educational usage. For questions or concerns about this policy, or to report a problem with internet access, contact the IT staff by email at helpdesk@digipen.edu.

Copyright Infringement and Peer-to-Peer File Sharing

DigiPen prohibits copyright infringement in any form, including the illegal downloading and uploading of copyrighted works through peer-to-peer file sharing as defined by Title 17 of the United States Code.

Copyright infringement may result in civil and criminal penalties, including damages of up to $150,000 per infringed work, imprisonment of up to five years, and fines of up to $250,000 per offense. For more information, please see the website of the U.S. Copyright Office at copyright.gov, especially the FAQs at copyright.gov/help/faq.

In addition to the civil and criminal penalties outlined above, students who engage in illegal downloading or unauthorized distribution of copyrighted materials using DigiPen's network will also be referred to DigiPen's Appeals and Disciplinary Committee and be subject to disciplinary sanctions, up to and including expulsion from the Institute, under the Regulation of Conduct and Disciplinary Procedures.

DMCA Copyright Infringement Policy

DigiPen Institute of Technology ("DigiPen") respects the intellectual property rights of others and expects members of its community to do the same. In accordance with the Digital Millennium Copyright Act (DMCA), DigiPen will respond to notices of alleged copyright infringement occurring on systems or networks operated by the institution.

DigiPen has adopted the following procedures for addressing claims of copyright infringement involving materials posted, transmitted, or stored on DigiPen-controlled systems.

Designated DMCA Agent

Notifications of claimed copyright infringement should be sent to DigiPen's designated DMCA agent:

Name: Chief Financial Officer
DigiPen Institute of Technology
9931 Willows Road NE
Redmond, WA 98052
Email: mgats@digipen.edu

The designated agent is registered with the U.S. Copyright Office DMCA directory (https://dmca.copyright.gov/osp/).

Notice of Claimed Infringement

To be effective under the DMCA, a notification must include the following information:

1. A physical or electronic signature of the copyright owner or a person authorized to act on their behalf.
2. Identification of the copyrighted work claimed to have been infringed.
3. Identification of the material claimed to be infringing and information reasonably sufficient to permit DigiPen to locate the material.
4. Contact information for the complaining party, including address, telephone number, and email address.
5. A statement that the complaining party has a good-faith belief that the use of the material is not authorized by the copyright owner, its agent, or the law.
6. A statement that the information in the notification is accurate and, under penalty of perjury, that the complaining party is authorized to act on behalf of the copyright owner.

Upon receipt of a valid notice, DigiPen will take appropriate action, which may include removing or disabling access to the material.

Counter-Notification

Users who believe their content was removed or disabled in error may submit a counter-notification that includes the following:

1. A physical or electronic signature of the user.
2. Identification of the material that was removed or disabled and its previous location.
3. A statement under penalty of perjury that the user has a good-faith belief the material was removed or disabled due to mistake or misidentification.
4. The user's name, address, and telephone number, and a statement consenting to the jurisdiction of the Federal District Court for the district in which the user resides.

If DigiPen receives a valid counter-notification, it may restore the material in accordance with the DMCA unless the complaining party files a court action seeking to restrain the alleged infringement.

Repeat Infringer Policy

DigiPen maintains a policy of terminating, in appropriate circumstances, the accounts or network access of users who are determined to be repeat infringers of copyright.

Accommodation of Standard Technical Measures

DigiPen accommodates and does not interfere with standard technical measures used by copyright owners to identify or protect copyrighted works.

DigiPen Streaming Policy

Residential programs at DigiPen require in-person participation. Streaming of residential (in-person) classes is not permitted. Courses designated as hybrid or online may include streaming.

Emergency Procedures

For all emergency situations, students, faculty, and staff are to remove themselves from personal danger before contacting anyone for assistance.

For more information involving both emergencies and non-emergencies situations, please visit our website at https://www.digipen.edu/student-portal/campus-information/emergency-procedures.

Calendar and Deadlines

Fall 2026 Semester

Date	Event	Remarks
August 17, 2026 *Monday*	Tuition balance due for Fall 2026 Semester Last day to submit Application for Alumni Audit for Fall 2026 semester.	
August 24 – 28, 2026 *Monday – Friday*	Orientation – Incoming students	
August 31, 2026 *Monday*	Classes begin – Fall 2026 semester	
September 7, 2026 *Monday*	Labor Day observed	No Classes - Labs Open
September 8, 2026 *Tuesday*	Last day to add courses for Fall 2026 semester. Internship for Credit Registration Deadline for Fall 2026 semester.	
September 10, 2026 *Thursday*	Last day to drop Fall 2026 semester courses for 100% refund.	
September 14, 2026 *Monday*	Final day to drop Fall 2026 semester courses without academic penalty. Census Day – Last day for students to submit Documented Academic Activity in Moodle, for each of their classes.	
September 29, 2026 *Tuesday*	Withdrawal deadline for 50% refund.	
October 12, 2026 *Monday*	Indigenous Peoples Day / Columbus Day	No Classes - Labs Open
October 26, 2026 *Monday*	Final day to receive a "W" on transcript for Fall 2026 semester withdrawals. Withdrawals from the Institute after this date will receive a "WF" (or 0 quality points) which will appear on the transcript.	
TBD, 2026	Fall Career Summit	
November 2, 2026 *Monday*	Official registration for Spring 2027 semester courses begins	
November 11, 2026 *Wednesday*	Veterans Day observed	No Classes - Labs Open
November 23, 2026 *Monday*	Last day to submit Request for Change of Major for Spring 2027 semester. Last day to submit Application for Readmission for Spring 2027 semester. Last day to submit Application for Non-Degree Seeking for Spring 2027 semester.	
November 26 – 27, 2026 *Thursday – Friday*	Thanksgiving observed	No Classes - Labs Open
December 7, 2026 *Monday*	Last day to submit Application for Alumni Audit for Spring 2027 semester.	
December 7 – 11, 2026 *Monday – Friday*	Fall 2026 semester final exams	
December 11, 2026 *Friday*	Fall 2026 semester ends	
December 15, 2026 *Tuesday*	Fall 2026 semester grades due Tuition balance due for Spring 2027 semester.	
December 17, 2026 *Thursday*	Fall 2026 semester grade appeal deadline	

The Institute is closed on all statutory holidays. Exam periods and breaks may be subject to change. The laboratory facilities may be closed for a period of two consecutive days per month for maintenance. It is usually the last two working days of the month unless otherwise posted.

Spring 2027 Semester

Date	Event	Remarks
January 3, 2027 *Sunday*	Orientation – Incoming Spring 2027 students	
January 4, 2027 *Monday*	Classes begin – Spring 2026 semester	
January 12, 2027 *Tuesday*	Last day to add courses for Spring 2027 semester. Internship for credit registration deadline for Spring 2027 semester.	

Date	Event	Remarks
January 14, 2027 *Thursday*	Last day to drop Spring 2027 semester courses for 100% refund	
January 18, 2027 *Monday*	M. L. King Jr. Day observed	No Classes - Labs Open
January 18, 2027 *Monday*	Final day to drop Spring 2027 semester courses without academic penalty Census Day – Last day for students to submit Documented Academic Activity in Moodle for each of their classes.	
February 2, 2027 *Tuesday*	Withdrawal deadline for 50% refund	
February 5, 2027 *Friday*	Founder's Day observed	No Classes - Labs Open
February 15, 2027 *Monday*	President's Day observed	No Classes - Labs Open
March 1, 2027 *Monday*	Final day to receive a "W" on transcript for Spring 2026 semester withdrawals. Withdrawals from the Institute after this date will receive a "WF" (or 0 quality points) which will appear on transcript. Final day to drop a course.	
March 1 - March 5, 2027 *Monday-Friday*	Spring break	No Classes - Labs Open
March 15, 2027 *Monday*	Official registration for Summer 2027 and Fall 2027 semester courses begins	
April 5, 2027 *Monday*	Last day to submit Request for Change of Major for Summer 2027 semester. Last day to submit Application for Readmission for Summer 2027 semester. Last day to submit Application for Non-degree Seeking for Summer 2027 semester.	
TBD, 2027	NextGen Career Summit	
April 15, 2027 *Thursday*	Tuition balance due for Summer 2027 semester	
April 19, 2027 *Monday*	Last day to submit Application for Alumni Audit for Summer 2027 semester.	
April 19 – 23, 2027 *Monday – Friday*	Spring 2027 semester final exams	
April 23, 2027 *Friday*	Spring 2027 semester ends	
April 26 – May 7, 2027 *Monday – Friday*	Intersession	
April 27, 2027 *Tuesday*	Spring 2027 semester grades due	
April 29, 2027 *Thursday*	Spring 2027 semester grade appeal deadline	
TBD, 2027	Commencement	

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Summer 2027 Semester

Date	Event	Remarks
May 10, 2027 *Monday*	Classes begin – Summer 2027 semester	
May 18, 2027 *Tuesday*	Last day to add courses for Summer 2027 semester. Internship for Credit Registration Deadline for Summer 2027 semester.	
May 20, 2027 *Thursday*	Last day to drop Summer 2027 semester courses for 100% refund.	
May 24, 2027 *Monday*	Final day to drop Summer 2027 semester courses without academic penalty. Census Day – Last day for students to submit Documented Academic Activity in Moodle for each of their classes.	
May 31, 2027 *Monday*	Memorial Day observed	No Classes - Labs Open
June 8, 2027 *Tuesday*	Withdrawal deadline for 50% refund.	

Date	Event	Remarks
June 18, 2027 *Friday*	Juneteenth Day observed	No Classes - Labs Open
July 5, 2027 *Monday*	Independence Day observed. Final day to receive a “W” on transcript for Summer 2027 semester withdrawals. Withdrawals from the Institute after this date will receive a “WF” (or 0 quality points) which will appear on the transcript. Final day to drop a course.	No Classes - Labs Open
July 12, 2027 *Monday*	Last day to submit Request for Change of Major for Fall 2027 semester. Last day to submit Application for Readmission for Fall 2027 semester. Last day to submit Application for Non-degree Seeking for Fall 2027 semester.	
July 26 – July 30, 2027 *Monday – Friday*	Summer 2027 semester final exams	
July 30, 2027 *Friday*	Summer 2027 semester ends	
August 3, 2027 *Tuesday*	Summer 2027 semester grades due	
August 5, 2027 *Thursday*	Summer 2027 semester grade appeal deadline	
August 15, 2027 *Sunday*	Last day to submit Application for Alumni Audit for Fall 2027 semester.	

The Institute is closed on all statutory holidays. Exam periods and breaks may be subject to change. The laboratory facilities may be closed for a period of two consecutive days per month for maintenance. It is usually the last two working days of the month unless otherwise posted.

Fall 2027 Semester

Date	Event	Remarks
August 16, 2027 *Monday*	Tuition balance due for Fall 2027 semester. Last day to submit Application for Alumni Audit for Fall 2027 semester.	
August 23 – 27, 2027 *Monday – Friday*	Orientation – Incoming students	
August 30, 2027 *Monday*	Classes begin – Fall 2027 semester	
September 6, 2027 *Monday*	Labor Day observed	No Classes - Labs Open
September 7, 2027 *Tuesday*	Last day to add courses for Fall 2027 semester. Internship for Credit Registration Deadline for Fall 2027 semester.	
September 9, 2027 *Thursday*	Last day to drop Fall 2027 semester courses for 100% refund.	
September 13, 2027 *Monday*	Final day to drop courses without academic penalty. Census Day – Last day for students to submit Documented Academic Activity in Moodle for each of their classes.	
September 28, 2027 *Tuesday*	Withdrawal deadline for 50% refund.	
October 11, 2027 *Monday*	Indigenous Peoples Day/Columbus Day	No Classes - Labs Open
October 25, 2027 *Monday*	Final day to receive a “W” on transcript for Fall 2027 semester withdrawals. Withdrawals from the Institute after this date will receive a “WF” (or 0 quality points) which will appear on transcript.	
TBD, 2027	Fall Career Summit	
November 1, 2027 *Monday*	Official registration for Spring 2028 semester courses begins.	
November 11, 2027 *Thursday*	Veterans Day observed	No Classes - Labs Open
November 22, 2027 *Monday*	Last day to submit Request for Change of Major for Spring 2028 semester. Last day to submit Application for Readmission for Spring 2028 semester. Last day to submit Application for Non-degree Seeking for Spring 2028 semester.	
November 25 – 26, 2027 *Thursday – Friday*	Thanksgiving observed	No Classes - Labs Open

Date	Event	Remarks
December 6, 2027 *Monday*	Last day to submit Application for Alumni Audit for Spring 2028 semester.	
December 6 – 10, 2027 *Monday – Friday*	Fall 2027 semester final exams	
December 10, 2027 *Friday*	Fall 2027 semester ends	
December 14, 2027 *Tuesday*	Fall 2027 semester grades due	
December 15, 2027 *Wednesday*	Tuition balance due for Spring 2028 semester	
December 16, 2027 *Thursday*	Fall 2027 semester grades appeal deadline	
TBD, 2027 or 2028	Orientation – Incoming Spring 2028 students	

The Institute is closed on all statutory holidays. Exam periods and breaks may be subject to change. The laboratory facilities may be closed for a period of two consecutive days per month for maintenance. It is usually the last two working days of the month unless otherwise posted.

Spring Start Policy

Fall and Spring Start Students

Both Fall and Spring Start students have a Recommended Sequence of Courses (RSOC) that aligns semester course offerings with their specific degree plan course requirements. By following these RSOCs, students ensure that they are able to get the courses they need in a timely and efficient manner. They will stay on-track with degree requirements and ensure that they have completed the necessary pre-requisite courses for each succeeding semester's required courses. It is very strongly suggested that all students follow these RSOCs when registering for courses each semester.

In the following pages, you will find detailed information about your degree plans. Each degree plan will have the RSOC listed for Fall Starts. Also, those degree plans that allow Spring Starts will list their RSOCS accordingly. Fall and Spring Starts have slightly different RSOCs and slightly different rules during their first year of classes. However, in the second year, the Fall and Spring Starts should be on-track with one another, and they will both follow the same RSOC and registration rules.

Fall Starts

Fall Start students are required to register for classes during all Fall and Spring semesters. Summer semester is not required, but is an option for advancing more quickly or for catching up on failed coursework. If Fall Start students do not register for at least one class in each Fall and Spring semester, they will be administratively withdrawn from DigiPen. Although students are only required to register for a minimum of one class each semester, we strongly advise them to register for a full-load or to seek guidance and assistance from our Student Success Advisors if they feel that are not able to do so.

Spring Starts

Spring Start students are required to register for classes during all Fall and Spring semesters. However, unlike Fall Starts, Spring Start students must also register for classes in their first Summer semester (their 2nd semester). After their first year, Spring Starts will no longer be required to register for Summer semester, but it is an option for advancing more quickly or for catching up on failed coursework. If Spring Start students do not register for at least one class in each Fall and Spring semester and in their first Summer semester (2nd semester of degree plan), they will be administratively withdrawn from DigiPen. Although students are only required to register for a minimum of one class each semester, we strongly advise them to register for a full-load or to seek guidance and assistance from our Student Success Advisors if they feel that are not able to do so.

DigiPen Admissions Process and Requirements

Visiting DigiPen

DigiPen offers many options for prospective students and families to visit us both on campus and online. We encourage you and your family to take a tour of the campus, shadow a current DigiPen student, or attend any number of in-person presentations and preview days. If you can't make it to campus, we also offer a variety of virtual experiences, with current students, faculty, and staff. Our admissions staff are committed to making these experiences as easy and accessible as possible. Anyone interested in finding out more about DigiPen Institute of Technology and its programs is welcome to attend. For information on dates and to register to attend these events, please visit our website at digipen.edu/visit-us or email admissions@digipen.edu.

Visitors interested in learning about DigiPen's admission requirements, application process, and degree programs are encouraged to schedule a meeting and tour with an admissions representative. To schedule an appointment, please contact the Office of Admissions at admissions@digipen.edu or check the website to register.

High School Transcript Policy

Applicants will be exempted from submitting high school transcripts who provide proof of having completed 60 semester college credits or 72 quarter college credits, have obtained an associate's degree, or have obtained a bachelor's degree from a fully accredited college. Final transcripts from their college or university will be required along with official transcripts from ALL post-secondary institutes attended. All other applicants must provide high school transcripts.

Policy on the Admission of Students with Disabilities

DigiPen makes no pre-admission inquiry about an applicant's disability. Applicants may share information about their disability on their application for admission, if they choose. DigiPen recognizes the decision to self-identify any disability is a personal one and we respect an applicant's decision not to do so.

DigiPen Institute of Technology is committed to providing equal opportunity and access to prospective students with disabilities in completing and submitting an application for admission.

Applicants who experience disability and would like to request accommodations in completing their application for admission should contact: admissions@digipen.edu.

Some examples of reasonable accommodation in the admissions process include:

- Use of print or electronic materials
- Use of auxiliary aids
- Assistance in reviewing the application guidelines and criteria

Contacting the Office of Admissions for disability-related assistance is confidential. Information about an applicant's disability will be kept private in accordance with federal and state law, and not shared with admission review committee members.

Undergraduate Application Process

DigiPen Institute of Technology enrolls new degree-seeking students for both fall and spring semesters. For students enrolling in the fall, we offer Early Action I (November 15th) and Early Action II (January 15th) deadlines, as well as a general deadline of March 1st. However, the Institute will continue to accept qualified applicants until July 1st for programs that have not reached maximum enrollment.

Applicants are encouraged but not required to submit all materials within four weeks of their initial application submission. Applicants applying Early Action will receive a decision within 4 weeks after submitting all required materials.

Applicants choose their preferred major at the time of application, however during the review process, DigiPen may determine that an applicant fits more appropriately into another degree program and may admit an applicant into another program. Additionally, DigiPen may sometimes determine that an applicant qualifies for admission to several programs and notes this on the acceptance letter.

Except where noted, all undergraduate applicants must submit the following for consideration:

1. DigiPen Institute of Technology's Online Application for Admission. This application form is available at: digipen.edu/admissions/how-to-apply
2. $60.00 application fee.
3. Official high school transcripts or official GED test scores, if applicable. International students should submit attested copies or certified-true copies of all academic records. See more about this requirement in the International (Non-U.S. Resident) Applicants section if an applicant has transcripts and other official documentation in languages other than English.

DigiPen requires all applicants to have completed grade 12 or the equivalent with a recommended minimum 2.5 cumulative GPA; for international students, DigiPen will determine the minimum academic performance standards based on the educational system of the individual applicant. Students in their final year may submit current transcripts for evaluation purposes and must submit final transcripts showing completion of grade 12, or equivalent, prior to beginning classes.

- Applicants who have earned their GED should submit sealed transcripts for the time that they attended high school, in addition to their GED test scores.
- For home-schooled applicants, please see the Home-Schooled Applicant Admission Requirements section below.
- Applicants will be exempted from submitting high school transcripts who provide proof of having completed 60 semester college credits or 72 quarter college credits, have obtained an associate's degree, or have obtained a bachelor's degree from a fully accredited college. Final transcripts from their college or university will be required along with official transcripts from ALL post-secondary institutes attended.

4. Official transcripts from ALL post-secondary institutes attended, if applicable. International students should submit attested copies or certified-true copies of all academic records. Again, see more about this requirement in the International (Non-U.S. Resident) Applicants section if an applicant has transcripts and other official documentation in languages other than English. This includes transcripts for high school concurrent enrollment programs. Transcripts must be sent by the issuing school directly to DigiPen. Alternatively, they may be sent by the applicant if they are SEALED in an envelope prepared by the issuing school and stamped over the seal by the Office of the Registrar, showing that they have not been opened.
5. Official SAT or ACT exam scores (Optional). Submitting SAT or ACT scores alongside your application is optional. Applicants will not be disadvantaged if they are unable to submit a test score. We evaluate applicants holistically and consider all qualifications and circumstances in our admission decisions. Applications will be reviewed once all required materials have been received, regardless of whether SAT or ACT scores are included.

   There is no minimum score requirement for either test, and we do not prefer one test over the other. SAT II Subject Tests are not required for admission but may be considered during the evaluation process if included with your application. If you would like your scores to be considered for your application, they must be sent directly to DigiPen by the issuing organization or included on your official high school transcripts. You can order your ACT scores at act.org and your SAT scores at collegeboard.org. To have your official SAT or ACT scores sent to DigiPen, include the college program code 4138 on your SAT form or 6659 on your ACT form.
6. Personal Statement (Optional, except for Bachelor of Fine Arts applicants). Please review the requirements and recommendations about completing this component of the application online at digipen.edu/admissions/how-to-apply/undergraduate-admissionsrequirements/bachelor-of-science-degrees#personal-statement.
7. Letters of recommendation (Optional). Two letters of recommendation from individuals familiar with the applicant's academic background and/or work ethic, e. g. an instructor, school counselor, or employer. Recommendation letters from family members will not be considered. Applicants should notify the authors of their recommendation letters prior to entering names. Applicants may choose to enter the contact information for their reference in the online application. The form will email the reference a link to an electronic recommendation form. If your references do not receive an electronic recommendation form, they may send their letter of recommendation to admissions@digipen.edu. For hard copy submissions, each letter MUST be signed and dated by the author, and each must contain a contact phone number. Please note that these letters are NOT REQUIRED for applicants to DigiPen's undergraduate degree programs.
8. Other official documentation, if applicable. This includes, but is not limited to, official proof of proficiency in the English language (see more about this requirement in the Proof of Proficiency in the English Language section), copy of Permanent Resident card, and a financial responsibility form for international students.
9. Art Portfolio. This is only required for applicants to the Bachelor of Fine Arts in Digital Art and Animation degree program. Guidelines for the Art Portfolio are available online at digipen.edu/admissions/how-to-apply/undergraduate-admissions-requirements/bfa-in-digital-art-and-animation#art-portfolio.
10. Performance Portfolio. This is only required for applicants to the Bachelor of Arts in Music and Sound Design degree program. Guidelines for the Performance Portfolio are available online at digipen.edu/admissions/how-to-apply/undergraduate-admissions-requirements/ba-in-music-and-sound-design#performance-portfolio.
11. Design Portfolio. This is only required for applicants to the Bachelor of Arts in Game Design degree program. Guidelines for the Design Portfolio are available online at digipen.edu/admissions/how-to-apply/undergraduate-admissions-requirements/ba-in-game-design#design-portfolio.

Homeschooled Applicant Admission Requirements

DigiPen welcomes applicants from all types of educational backgrounds and encourages homeschooled students to apply. DigiPen evaluates all applicants on an individual basis and considers all aspects of their application materials.

Homeschooled Applicants Who Are Washington Residents

In addition to the standard admission requirements, homeschooled applicants who are from Washington state should submit as much information as possible about their homeschooled experience, including a detailed homeschool transcript that provides course titles, a brief description of each course's content, a grade or performance assessment for each course, details about the duration of study, and their graduation date or expected graduation date.

Homeschooled Applicants from States Other than Washington

Due to the diverse nature of home-schooled requirements from one state to the next, DigiPen would prefer:

- Transcripts from a nationally accredited home-school program, OR;
- Detailed homeschool transcripts, as described AND passing GED test scores as proof of high school graduation.

Other forms of proof of high school equivalence will be considered on a case-by-case basis; however, these alternative forms of proof should be approved in advance by contacting the Office of Admissions at admissions@digipen.edu.

Graduate Application Process

Admissions Requirements for MS in Computer Science

All Master of Science in Computer Science applicants should complete their application by July 1 to guarantee timely evaluation of their application. Any applications completed after July 1 may not be evaluated for the current application year. All graduate applicants must submit the following:

1. DigiPen Institute of Technology's Online Application for Admission. This application form is available at: digipen.edu/admissions/how-to-apply/graduate-admissions-requirements.
2. $60.00 application fee.
3. Applicants to the Master of Science in Computer Science program with an undergraduate degree in any major other than Computer Science or Computer Engineering are required to take DigiPen's Computer Science Exam. A score of 70% is the preferred minimum acceptable score. Please note that achieving an acceptable score on the DigiPen Computer Science Exam does not guarantee admission. For more information on the DigiPen Computer Science Exam, please email admissions@digipen.edu to be directed to the testing services coordinator.
4. Official transcripts from ALL colleges and universities attended. International students must provide attested copies or certified-true copies of all academic records. See more about this requirement in the International (Non-U.S. Resident) Applicants section if an applicant has transcripts and other official documentation in languages other than English.
    1. Official transcripts from all colleges and universities attended must be sent directly by the issuing institutions. Alternatively, applicants may send their transcripts if they are SEALED in envelopes and STAMPED across the seal by the Office of the Registrar.
    2. Applicants must provide evidence of their completion of a bachelor's degree with a recommended minimum 2.5 cumulative GPA; for international students, DigiPen will determine the minimum academic performance standards based on the educational system of the individual applicant.
5. Other official documentation, if applicable. This includes, but is not limited to, official proof of proficiency in the English language (See more about this requirement in the Proof of Proficiency in the English Language section), copy of Permanent Resident card, and a financial responsibility form for international students.

Admissions Requirements for MFA in Digital Arts

All Master of Fine Arts in Digital Arts applicants should complete their application by July 1 to guarantee timely evaluation of their application. Any applications completed after July 1 may not be evaluated for the current application year. All graduate applicants must submit the following:

1. DigiPen Institute of Technology online Application for Admission. This application form is available at: digipen.edu/admissions/how-to-apply/graduate-admissions-requirements/mfa-in-digital-arts
2. $60.00 application fee.
3. Official transcripts from ALL colleges and universities attended. International students must provide attested copies or certified-true copies of all academic records. See more about this requirement in the International (Non-U.S. Resident) Applicants section if an applicant has transcripts and other official documentation in languages other than English.
    - Official transcripts from all colleges and universities attended must be sent directly by the issuing institutions. Alternatively, applicants may send their transcripts if they are SEALED in envelopes and STAMPED across the seal by the Office of the Registrar.
    - Applicants must provide evidence of their completion of a bachelor's degree with a recommended minimum of 3.0 cumulative GPA; for international students, DigiPen will

determine the minimum academic performance standards based on the educational system of the individual applicant.

4. Statement of Purpose. Guidelines for the Statement of Purpose are available online at digipen.edu/admissions/how-to-apply/graduate-admissions-requirements/mfa-in-digital-arts#essay
5. Art Portfolio. DigiPen's intent in reviewing applicants' portfolios is to ensure that they have appropriate foundational skills relative to the degree program to which they are applying. Guidelines for the Portfolio are available online at digipen.edu/admissions/how-to-apply/graduate-admissions-requirements/mfa-in-digital-arts#art-portfolio
6. Other official documentation, if applicable. This includes, but is not limited to, official proof of proficiency in the English language (See more about this requirement in the Proof of Proficiency in the English Language section), copy of Permanent Resident card, and a financial responsibility form for international students.

International (Non-U.S. Resident) Applicants

DigiPen welcomes students from all countries and cultures. Because of language and educational differences, DigiPen does require some additional information from international applicants to ensure successful experience for students. International applicants are asked to complete the application process early, as early as possible, to guarantee timely evaluation of their application and to allow time to process required documents for the U.S. Immigration and Customs Enforcement (ICE). DigiPen will continue to accept International applications after July 1, however applications completed after July 1 may not allow enough lead-time for documentation processing.

In addition to attested or certified-true copies of all academic records and any other degree-specific requirements found under the undergraduate or graduate admission requirements, all international applicants must meet the following minimum requirements:

Proficiency in the English Language (see the Proof of Proficiency in the English Language section).

Financial Responsibility. Evidence indicating that sufficient funds are available for the eight-month period of study and living expenses must be submitted to DigiPen and made available to the U.S. ICE upon entry into the United States. The Financial Responsibility Form and supporting documentation must be submitted, regardless of whether or not a student is living in the U.S.

International students intending to study at DigiPen must obtain an F-1 visa from the U.S. Department of State, via the U.S. embassy or consulate in their home country. An F-1 student is a non-immigrant who is pursuing a full course of study towards a specific educational or professional objective at a school in the United States. Once that objective has been attained, the F-1 student is expected to return to residence abroad. International students should note their citizenship on the application form for admission. If accepted, DigiPen will send a Form I-20 (Certificate of Eligibility for Nonimmigrant [F-1] Student Status). Applicants who are accepted but do not receive a Form I-20 in their acceptance packets should contact the Office of Admissions.

Once applicants receive their form I-20 they can take it to their nearest U.S. consulate to obtain a student visa. The visa process may take several months to complete, so DigiPen recommends that applicants complete the admissions process before July 1. Applicants must also take copies of the Financial Responsibility Form and supporting documents to prove they have sufficient financial resources for their education and stay in the United States. For more information on the F-1 visa process, please consult the Homeland Security Study in the States web page: studyinthestates.dhs.gov/. International students transferring to DigiPen from another institution within the U.S. must provide DigiPen with a completed Transfer-In Form to ensure that their I-20s are updated accordingly. Transfer-In Forms can be obtained on DigiPen's website or by contacting ***admissions@digipen.edu***. International students who will be bringing a dependent with them to the U.S., such as a child or spouse, will need to complete the appropriate sections of the Financial Responsibility form to ensure that an I-20 can be issued to their dependent.

Applicants who are Permanent Residents of the United States do not need a student visa; however, they must prove their immigration status by submitting a copy of their permanent residency card and marking the appropriate citizenship status on the application for admission. The copy of the permanent residency card confirms that a student is a legal resident and that the student may pursue studies at DigiPen. Permanent Residents are subject to the same rights, services, and rates as U.S. citizens.

International Students with Transcripts in Languages Other than English

Applicants with credentials issued in a language other than English, must submit them in both the original language and English. Please do not have your grades converted or interpreted in any way. For information on qualified translators, please contact the American Translators Association (atanet.org) or another recognized translation service (i.e., a certified translator, certified court interpreter, an authorized government official, and/ or official from the school where you obtained the degree). Proof of the translator's credentials must accompany each translation. Please note that self-translated copies are not acceptable. All transcripts and diplomas must be issued by a bona fide, legitimate degree-granting university. If the issuing school provides official documents in English, an additional English translation is not required.

Admission/Denial to DigiPen's Programs

DigiPen considers every part of an applicant's materials and qualifications when evaluating the applicant for admission. Meeting the minimum standards is not a guarantee for admission. Applicants who exceed the minimum standards are more likely to be admitted.

Please visit the Application Process page on our website for detailed information.

Reapplication Information

Applicants who are denied admission are encouraged to re-apply for a future term. By improving the areas suggested on the original decision letters (e.g. improving grades by taking community college courses, devoting more time and energy to any required portfolios, etc.) many individuals re-applying for admission are subsequently admitted.

Non-Degree Seeking Studies

Non-degree seeking applicants who are interested in taking individual courses may register for them based on the desired semester's course offerings, and availability. Applicants will be handled on a first-come, first-served basis.

Courses taken as non-degree seeking do not lead to a degree and are not applicable to earning a professional certificate from DigiPen.

Please visit the Non-Degree Seeking Studies page on our website for detailed information.

Degree Plan Policy

DigiPen students may only be enrolled in one degree plan at any given time. This includes all Non-Degree Seeking and Alumni Audit programs.

Readmission

Readmission applicants may apply to return to a valid DigiPen degree plan. The degree plan placement is decided by the Office of the Registrar and is not open to student choice.

- A student who wishes to return to DigiPen after a break in enrollment may apply to do so by completing a readmission application and submitting required materials. Students who are suspended due to academic or disciplinary reason may not return to the Institute until the semester following the suspension period. Students may apply for readmission to their eligible semester as soon as the admission period for that semester opens and applicable materials are available for submission. An interview may also be required as part of the readmission process. DigiPen cannot guarantee readmission into a student's original degree plan due to limited availability of course offerings from previous degree curricula. The decision on degree plan is made by the Institute and is not open to student choice. Visit the Readmission Process page on our website for more information.

Change of Major

Students may apply to switch from their current DigiPen degree plan to another DigiPen degree plan. This is called a Change of Major (COM). The Office of the Registrar will decide which catalog year the student will be assigned to for the new degree plan. This is not open to student choice.

Students must meet with their Student Success Advisor (Redmond) for advising, and with the Office of the Registrar (all campuses) for a degree audit to verify valid degree plans eligible to the student. Any program course waivers must be approved before the start of the semester in which the program change will take effect.

It is important to note that students will be required to select a semester in which they want to start the new degree plan. Once selected, the student will be required to register for and attend at least one class in the semester that the COM begins. If they do not, the COM will be revoked and the student will be reverted to the original degree plan. Visit the Change of Major page on our website for more information.

Students may not start a Change of Major (COM) in the same semester as a Leave of Absence (LOA) or Hardship Leave of Absence (HLOA).

- If a student receives an approval for a COM request, the student must attend classes in the semester immediately following the COM approval or that approval will be cancelled, and student must reapply for the COM.
- If student has received a COM but intends to take an LOA in the first semester of the COM, the COM will be cancelled, and they must reapply for a COM to begin the semester immediately following the LOA.
- If a student is currently on an LOA, they may apply for a COM, to be effective in the semester they return from the LOA. If the COM is approved while they are on LOA, they must register for and attend the classes for the new major in the semester immediately following the LOA (the start of the COM).

DigiPen Initiated Degree Plan Change

Degree Plan changes may sometimes be initiated by the Institute. Current students may be offered the option to change into a valid degree plan based on DigiPen's recommendation.

This recommendation must be agreed upon by the respective Program Director, the Registrar, the Director of Student Success, the Dean of Faculty, and the Vice President of Compliance and Regulatory Affairs.

- DigiPen regularly reviews its programs for rigor and continued relevance to the industries. As such, DigiPen may determine that a more updated degree plan will be more beneficial to students in terms of program outcomes and occupational outlook. The degree plans for programs are reviewed by the respective Program Director, the Registrar, the Director of Student Success, the Dean of Faculty, and the VP of Compliance and Regulatory Affairs.

First Year Summer Catch-up Program Policy

If a student receives a non-passing grade one or more classes during the fall or spring semester and retakes the class(es) during the summer semester (subject to course availability), the student would be able to retake those classes at no tuition cost.

If a student receives a non-passing grade in one or more prerequisite classes during the fall semester (semester 1) and retakes the class(es) during the spring semester, the student would be able to take the required semester 2 courses in the summer that they were not able to take in the spring (subject to course availability) at no tuition cost (e.g., If you fail CS 120 in Fall, retake in Spring, then you are eligible to take CS 170, CS 230, and GAM 150 in Summer).

The value of the tuition credit is capped at two classes for summer. Students will be charged for their registered courses and will receive a tuition credit through a financial aid grant for the cost of tuition for these class(es). Students will need to pay for a class once, so if they received a refund from a dropped or withdrawn course that they are trying to retake the credit will not apply. Students will be responsible for all fees associated with the semester.

To qualify for no tuition cost courses during the summer semester, the student must be registered for classes during the following fall semester. If the student later drops their fall courses, they will retroactively be required to repay summer tuition.

DigiPen Study Abroad Policy

Description

DigiPen currently has three campuses worldwide and may have more in the future. It is our hope that students from one of our campuses may wish to spend time studying at one of our other campuses during their time with DigiPen. Below is a summary of our Study Abroad Policy. If a student wishes to take part in this opportunity, they should seek more information from International Student Affairs & Study Abroad.

Who May Participate

Students registered at any of our DigiPen campuses may request a Study Abroad to one of our other DigiPen campuses. DigiPen Students may participate in our Study Abroad Program if they are in Good Academic Standing and meet the specific GPA and other requirements of their home campus. Students must complete at least one school year at the Home Campus before participating in the DigiPen Study Abroad Program. However, students may submit their application during the first year, to ensure that they are able to attend their Study Abroad in the Fall semester of their second year.

Length of DigiPen Study Abroad

Study Abroad may be requested for either one or two semesters. Students may request for Fall semester, Spring semester, or both. These semesters may be taken all at one host campus or they may be divided into two single-semester Study Abroad visits, at two separate host campuses. Students may also request to include Summer semester, but this is not guaranteed.

For the 2026-2027 school year, only Summer 2027 is available for Study Abroad.

Restrictions

Although Study Abroad students may attend the host campus for their final two semesters, they may only receive their degree from the home campus at which they are actively matriculated as a degree-seeking student. They must return to their home campus and graduate there.

F1 international students cannot participate in Study Abroad in their last semester due to immigration complications. They must also receive approval from the International Student Affairs & Study Abroad (ISASA) office to participate in Study Abroad.

Study Abroad students must be in Good Academic Standing and must meet/maintain the specific GPA requirements of their home campus during the Study Abroad experience.

Students must have a minimum of 70% PACE buffer before and during the Study Abroad experience.

Only credits earned at the host campus with a C- or better, will be articulated back to their home campus upon their return and applied to their degree as either required course credit or elective credit accordingly.

Students will be admitted to the host campus as Non-Degree Seeking (NDS) students.

For students receiving financial aid, these classes must be part of their regular degree plan at the home campus and must be approved by the home campus Financial Aid Department.

Advising and Conduct

All Study Abroad students must attend advising at their home campus as part of the official Study Abroad application. Study Abroad students must adhere to both home campus and host campus conduct requirements.

Tuition and Financial Aid

Both resident and non-resident Study Abroad students will pay a flat tuition rate (15 credits and above) based on the Redmond tuition rate, regardless of their enrollment status. The fee will be $375 per semester, with all students from Redmond, Bilbao, and Singapore paying the same amount

Housing

Study Abroad students are encouraged to stay in DigiPen approved/coordinated Housing, if there is availability. DigiPen Housing at some campuses is limited and is not guaranteed. DigiPen may choose to limit the number of Study Abroad participants each semester due to housing limitations or course availability. Students may opt to find their own housing if they so desire.

Optional Practical Training (OPT) Opportunities in the U.S.

Students on the Study Abroad program will **not** be eligible for OPT. Only students who officially transfer to the host campus as a full-time matriculated degree-seeking student, study one academic year, and receive their degree, may be eligible for up to three years of OPT in the U.S.

Official Transfer to Host Campus after Study Abroad

If a Study Abroad student wishes to stay longer than two semesters (not including Summer) at the host campus, they must officially transfer by withdrawing from their home campus and from the Study Abroad program. Then, they must apply for admittance into the host campus as an Active (matriculated), Degree-Seeking student.

Students may only transfer if they have completed less than 75% of their degree at the original home campus and must have at least a 2.0 Cumulative GPA at the time of transfer.

Students must complete a minimum of 25% of their required degree credits at the campus awarding the degree.

Students who do transfer officially to the host campus must maintain Active (matriculated) status for one full academic year (two semesters) there before a degree may be awarded from that campus.

Basic Process for Students

1. Students apply during the application window.
2. Students participate with various departments to fulfill all requirements prior to being approved.
3. Students go to Host campus for their Study Abroad experience.
4. Student completes semester(s) and returns to home campus to complete degree.

Transfer Policies

Transfer Credit Policy

Incoming students should submit final college transcripts at least two weeks prior to the start of classes to receive transfer credit. Transcripts received after this date are not guaranteed to be evaluated prior to the start of classes.

No transfer or waived credit may be accepted for a course during any semester in which a student has enrolled and attended the same course.

Transfer credit processed after August 14 will be accrued in the Fall Semester; transfer credit processed after the start of Spring Semester will be accrued in the Spring Semester; and transfer credit processed after the start of Summer Semester will be accrued in the Summer Semester, or the next semester in which the student is actively enrolled. Students must be actively enrolled during the semester of accrual to receive transfer credit.

Graduating students must be actively enrolled during their final semester at DigiPen.

Transfer Credit Process

Students who have documented college-level credit from another institution are automatically considered for transfer credit during the admissions application process. It is the student's responsibility to send all official transcripts and test scores for consideration.

Transfer credit evaluations are completed on a course-by-course basis. The Office of the Registrar will evaluate college-level credit earned at other accredited institutions with respect to a student's degree program at DigiPen. For transfer credit to be accepted, it must satisfy a course requirement for the student's degree program.

To be considered for transfer credit, courses from other institutions must have been taken within the last 10 years and must appear on an official transcript from an accredited institution with a grade of C or better. DigiPen reserves the right to accept or reject credits earned at other institutions. Credits earned at a DigiPen campus are not subject to the 10-year expiration policy. Transferred courses are entered on transcripts, but no grades or quality points are awarded. Transfer credit is not calculated into the student's grade point average at DigiPen.

Transfer credit may be accepted subject to the following conditions and restrictions:

1. The course(s) offered for transfer must be taken at an accredited institution, approved by the regulatory authority which oversees the educational system in the country where the institution is located. These courses must appear on official transcripts from the institution. The final decision regarding the transferability of credits rests with DigiPen.
2. The course(s) must be comparable in outcomes, competencies, and academic quality to DigiPen courses; transfer credit will be denied for courses not meeting this standard.
3. Transfer credit will be considered for courses in which the grade of "C" or better is recorded.
4. Courses will be considered only if taken and passed within the last 10 years.
5. Courses considered for transfer to a student's major are subject to review by academic department offices and may require a validation examination, portfolio review, and/or additional documentation to be approved.
6. Developmental courses, orientation courses, or courses that receive a "pass" or "credit" grade are not eligible for transfer credit.
7. In general, designated project and performance courses may not be satisfied with transfer credit.
8. **Undergraduate Students**: A minimum of 50% of undergraduate degree program requirements must be completed at DigiPen.
9. **Graduate Students**: The Master of Fine Arts in Digital Arts and Animation program may accept up to 15 credits in transfer from other colleges and DigiPen programs. The Master of Computer Science program may accept up to 12 credits in transfer from other colleges and DigiPen programs.

Students transferring to DigiPen under an established articulation agreement may be subject to policies that vary from those stated here.

A student who transfers 45 quarter credits worth of courses into DigiPen will receive 30 semester credits when doing so. If the semester credit totals of courses transferred do not add up to a full 30 credits, the remaining credits will be transferred as open elective credits. A student who transfers 90 quarter credits worth of courses into DigiPen will receive 60 semester credits when doing so. If the semester credit totals of courses transferred do not add up to a full 60 credits, the remaining credits will be transferred as open elective credits.

Military Transcripts

If you are a veteran, please submit all military transcripts when applying to DigiPen Institute of Technology. A review of your military transcripts will determine if any credits can be transferred to your degree program.

Intercampus Transfer Policy

Intercampus Transfers are students who have enrolled in a DigiPen degree program and wish to permanently transfer to another DigiPen campus. Students who intend to complete an intercampus transfer should first meet with their current campus Office of the Registrar to request official transcripts and to discuss the transfer requirements. Then the student should submit a completed Application for Campus Transfer to the Office of Admissions for the campus to which they wish to transfer. This application should include the application form, an essay on why they wish to transfer, and a completed transfer checklist. Students who wish to transfer should start the process as early as possible to allow enough time for materials transfer and preparing appropriate visa paperwork. Applications must be submitted by the following deadlines:

Transfer Semester	Deadline
Fall	July 1
Spring	December 1

Students will be notified by the Office of Admissions of the transfer campus whether the applications are approved or denied.

Students are eligible to apply for intercampus transfers any time after matriculation and prior to the completion of 75% of the entire program in which they enrolled. A minimum cumulative GPA of 2.0 is required for intercampus transfer. In order to earn an undergraduate degree from the DigiPen campus to which students wish to transfer, the following conditions must be satisfied (in addition to the program and graduation requirements):

1. Students should complete a minimum of twenty-five percent (25%) of the credits required for the undergraduate degree program at the DigiPen campus awarding the degree;
2. At a minimum, students must maintain matriculated/active status for at least one academic year and complete the final semester at the campus awarding the degree.

Students may contact the Office of the Registrar at their current campus for more information on transfer requirements, deadlines, and any other special procedures.

Articulation Agreements

For students who transfer to DigiPen under an established articulation agreement, credits will be accepted and grades earned will be included on DigiPen transcripts. These grades will also be calculated into the student's grade point average at DigiPen. Please contact the Office of the Registrar for a list of colleges with articulation agreements.

Transferability of Credits to Other Institutions

A student wishing to transfer DigiPen credits to another institution may request the Institute to furnish transcripts and other documents necessary to a receiving institution. The Institute advises all prospective students that the courses and credits reflected on their transcript may or may not be accepted by a receiving institution. Students should inquire with the specific receiving institution about the transferability of DigiPen credits.

Granting Credits for Work Experience

DigiPen does not grant credit for work experience.

Tuition and Fees

All tuition and fees are in U.S. dollars.

Application Fee

All tuition and fees are in U.S. dollars.

A $60.00 application fee must accompany the application form. The application fee is refundable if the applicant requests a refund within three days after submitting the application fee and cancels the application. This fee can be waived for students who demonstrate financial need through an SAT fee-waiver program or for participation in a similar need-based program. DigiPen also provides application fee waivers to applicants who visit for an on-campus admissions event or who attend an online information session or virtual admissions meeting.

Enrollment Fee

Upon acceptance into a degree program, a $150 enrollment fee must be paid to confirm enrollment. If a student cancels enrollment, the student may request a refund of the enrollment fee within three days after signing the enrollment agreement and making an initial payment.

Tuition Fee Payment

Please see the payment schedule in the Student Enrollment Agreement for dates and amounts due. The payment of tuition and all associated fees is the sole responsibility and obligation of the registering student. Tuition increases will be announced a minimum of six months before taking effect.

Payment of tuition and fees can be made by credit card, personal check, electronic fund transfer (eCheck), wire transfer (for International Transactions Only), or cash.

To pay by wire transfer, visit payment.paymytuition.com/paynow/digipen.

DigiPen accepts credit card payments (VISA, MasterCard, American Express, and Discover) online with a 3% domestic credit card fee and a 4.25% international credit card fee.

Separate payments are required for tuition and housing invoices. To process a credit card payment, the Office of Accounting will need:

- Student's full name
- Student's DigiPen ID number
- Credit card information
- Amount of payment

To process an electronic fund transfer or eCheck with no convenience fee, you will need:

- Bank routing number
- Bank account number

To pay online by eCheck or credit card, visit digipen.edu/departments/accounting/making-tuition-payments.

All payments made by personal check should be sent to:

DigiPen Institute of Technology
Office of Accounting: Accounts Receivable
9931 Willows Road NE
Redmond, WA 98052

Tuition

The flat-rate fee structure at DigiPen is determined based on the number of credit hours the student takes per term. In order for an undergraduate student to complete the degree program in the typical four years, the student must take an average of 16-22 credits per semester, and two semesters per school year.

The following tuition rates are for the 2026-27 academic year.

2026-27 Undergraduate Tuition

Total Cost Breakdown	U.S. Citizens and Residents	Non-U.S. Residents
Cost per Credit Fewer than 15 credits	$1,410/credit	$1,570/credit
Cost per Semester 15-22 Credit Flat Rate	$20,410	$22,750
Cost per Year 15-22 Credit Flat Rate	**$40,820**	**$45,500**

2026-27 Master of Computer Science (MSCS) Graduate Tuition

Total Cost Breakdown	U.S. Citizens and Residents	Non-U.S. Residents
Cost per Credit	$1,560/credit	$1,720/credit

2026-27 Masters of Fine Arts (MFA) Graduate Tuition*

Total Cost Breakdown	U.S. Citizens and Residents	Non-U.S. Residents
Cost per Credit	$1,180/credit	$1,300/credit

**The recommended program progression for full-time MFA students in their first year is 12 credits during the fall semester, 12 credits during the spring semester, and 9 credits during the summer semester. A*

50% discounted rate is applied for the summer semester if the student attended the previous fall and spring semesters. They should estimate tuition costs on a per credit basis.

Graduate Courses for Undergraduate Students

Students registered in an undergraduate degree program at DigiPen may register for graduate-level classes. Tuition for these graduate-level courses is charged at the undergraduate tuition rate including MCM 600 course.

Policies

General Notes About Tuition

- Tuition is subject to change with six months' notice.
- Students re-registering for a course that needs to be retaken must pay the regular course fees and are responsible for re-registering in the course. The First Year Summer Catch-up Program is an exception.
- Students auditing a course must pay the regular course fees.

Exception to Non–Citizen Tuition Rates

DigiPen will accept an affidavit form to grant resident status to to certain non–citizen students, allowing them to pay resident tuition rates. This policy does not make students eligible to receive need-based state or federal financial aid. Please refer to the *WA State Residency Policy* for details.

Cost of Attendance

The Cost of Attendance (COA) is a standardized set of budgets used as a basis for determining maximum financial aid eligibility. Cost of attendance is established each year based on changes in costs. The standard COA includes tuition, fees, housing and food, laptop, books, transportation, and personal expenses. Cost of attendance can vary depending on program of study, living arrangements while in school, and a variety of other factors. Cost of attendance can also be increased by exception to include expenses such as health insurance, childcare, and additional fees. For full COA details broken down by type of student, please visit digipen.edu/admissions/tuition-and-cost.

Student Tuition Recovery Fund (STRF) Disclosure

DigiPen Institute of Technology is a registered out-of-state institution confirmed by the Bureau for Private Postsecondary Education (BPPE) located in Sacramento, California.

The State of California established the Student Tuition Recovery Fund (STRF) to relieve or mitigate economic loss suffered by a student in an educational program at a qualifying institution, who is or was a California resident while enrolled, or was enrolled in a residency program, if the student enrolled in the institution, prepaid tuition, and suffered an economic loss. Unless relieved of the obligation to do so, you must pay the state-imposed assessment for the STRF, or it must be paid on your behalf, if you are a student in an educational program, who is a California resident, or are enrolled in a residency program, and prepay all or part of your tuition.

You are not eligible for protection from the STRF and you are not required to pay the STRF assessment, if you are not a California resident, or are not enrolled in a residency program.

It is important that you keep copies of your enrollment agreement, financial aid documents, receipts, or any other information that documents the amount paid to the school. Questions regarding the STRF may be directed to the

Bureau for Private Postsecondary Education,
1747 North Market Blvd., Suite 225,
Sacramento, CA 95833,
(916) 574-8900 or (888) 370-7589.

To be eligible for STRF, you must be a California resident or are enrolled in a residency program, prepaid tuition, paid or deemed to have paid the STRF assessment, and suffered an economic loss as a result of any of the following:

1. The institution, a location of the institution, or an educational program offered by the institution was closed or discontinued, and you did not choose to participate in a teach-out plan approved by the Bureau or did not complete a chosen teach-out plan approved by the Bureau.
2. You were enrolled at an institution or a location of the institution within the 120 day period before the closure of the institution or location of the institution, or were enrolled in an educational program within the 120 day period before the program was discontinued.
3. You were enrolled at an institution or a location of the institution more than 120 days before the closure of the institution or location of the institution, in an educational program offered by the institution as to which the Bureau determined there was a significant decline in the quality or value of the program more than 120 days before closure
4. The institution has been ordered to pay a refund by the Bureau but has failed to do so.
5. The institution has failed to pay or reimburse loan proceeds under a federal student loan program as required by law, or has failed to pay or reimburse proceeds received by the institution in excess of tuition and other costs.
6. You have been awarded restitution, a refund, or other monetary award by an arbitrator or court, based on a violation of this chapter by an institution or representative of an institution, but have been unable to collect the award from the institution.
7. You sought legal counsel that resulted in the cancellation of one or more of your student loans and have an invoice for services rendered and evidence of the cancellation of the student loan or loans.

To qualify for STRF reimbursement, the application must be received within four (4) years from the date of the action or event that made the student eligible for recovery from STRF.

A student whose loan is revived by a loan holder or debt collector after a period of noncollection may, at any time, file a written application for recovery from STRF for the debt that would have otherwise been eligible for recovery. If it has been more than four (4) years since the action or event that made the student eligible, the student must have filed a written application for recovery within the original four (4) year period, unless the period has been extended by another act of law.

However, no claim can be paid to any student without a social security number or a taxpayer identification number.

Washington State Residency Policy

As of July 1, 2003, Washington state law changed the definition of "resident student." The law makes certain students, including international students, eligible for resident student status—and eligible to pay resident tuition rates—when they attend public colleges and universities in this state. Although DigiPen Institute of Technology is a private college, it will honor this law under the same terms and conditions. Please note that the law does not make students eligible to receive need-based state or federal financial aid. International students who meet the following conditions and complete an affidavit/declaration/certification form may qualify for U.S. Citizen and Resident tuition rates at DigiPen:

1. Resided in Washington state for three years immediately prior to receiving a high school diploma, and completed the full senior year at a Washington high school; or
2. Completed the equivalent of a high school diploma and resided in Washington state for the three years immediately before receiving the equivalent of the diploma; or
3. Continuously resided in Washington state since earning the high school diploma or its equivalent.

Students must meet the above conditions and complete an affidavit/declaration/certification form. Students must submit the original copy of the completed affidavit to the Office of Admissions. Faxed or emailed forms, or forms without an original signature, are not acceptable.

This policy came into effect September 21, 2009. Tuition Affidavit forms may not be retroactively applied to tuition payable prior to September 21, 2009.

Books and Supplies

Estimated cost for textbooks and supplies is $710 per year. This cost is not included as a part of the cost of tuition.

New Student Orientation (NSO) Fee

This fee is $150 at the start of your first semester. This fee assists with covering programmatic and meal needs for orientation and the first week of cocurricular programming. This fee is only assessed once, unless you either return to the institution after an absence of two or more years or advance to a new academic level, such as moving from undergraduate to graduate.

Administrative Fees

This fee covers administrative support for students, such as add/drop requests and enrollment verifications.

This fee is $100.00 per semester for all students.

Student Engagement Fee

The Student Engagement fee is a $75 per semester fee that assists in funding the cocurricular experience at DigiPen. The funding will be split between the DigiPen Student Union (20%), Registered Student Organizations (20%) and the Dragon Activities Board (60%). This funding provides social and educational programs to the campus community and assists with the holistic DigiPen experience. This funding is managed by the Office of Student Engagement and its spending is directly influenced by students.

Alumni Audit Fees

Tuition, and all fees are waived except for an administrative fee of $100 per semester and course material fees if applicable. See individual course descriptions for any additional course fees.

Delinquent Account Fee

A monthly service fee of $50 assessed on delinquent accounts. A student's account is considered delinquent if the student has a balance due on the first day of the month following the start of the semester.

Graduation Fee

There is no graduation fee. Students who choose to participate in the Commencement Ceremony will be notified of the cost of regalia.

Diploma Fee

The Office of the Registrar will provide all students with a graduation packet (Official Transcript, Diploma, Graduation Letter, and Diploma Cover) following Commencement. Students may pick up this packet from campus, or have it mailed to them for free.

Diploma Replacement Fee

Any student requesting a replacement diploma will be accessed a $20 fee and, cost of shipping if applicable. The cost of shipping is variable.

Course Fees

Some courses may require lab or material fees.

Additional Courses

Students registered in an undergraduate degree program at DigiPen may register for graduate-level classes. Tuition for these credits will be assessed at the undergraduate rate.

Other Fees

Readmission Fees

A $25.00 non-refundable application fee must accompany the readmission application form. The readmission fee is waived for students returning to DigiPen from United States military active duty.

Cancellation and Refund Policies

Cancellation Policies

- Applicants who have not visited the school prior to enrollment will have the opportunity to withdraw without penalty within three business days following either the regularly scheduled orientation procedures or following a tour of the school facilities and inspection of equipment where training and services are provided.
- All monies paid by an applicant who cancels must be refunded if requested within three days after signing an enrollment agreement and making an initial payment.
- An applicant requesting cancellation more than three days after signing an enrollment agreement and making an initial payment, but prior to entering the school (i.e., prior to attending classes on or after the start date as noted on the enrollment agreement), is entitled to a refund of all monies paid excluding an enrollment fee of $150 and application fee.

Tuition Refund Policy and Schedule

General

To be eligible for a tuition refund for a course drop or institutional withdrawal, the student must be considered to have withdrawn from the course and/or institute. The determination of whether a student is deemed withdrawn and the effective date of withdrawal is determined by the Office of the Registrar in accordance with Nonattendance Taking Policy. In these cases, tuition shall be refunded as follows: Before the close of the 11th calendar day from the beginning of the semester: Students receive a 100% tuition refund.

Before the close of the 12th calendar day through the 30th calendar day from the beginning of the semester: Students receive a 50% tuition refund.

After the 30th calendar day from the beginning of the semester: Students are required to pay 100% of the tuition and no refund is available.

Except for the registration fee that is non-refundable, all other assessed fees are refunded on the same schedule as tuition payments.

Active-Duty Military Deployment

DigiPen recognizes a call to active service in the U.S. Armed services, Reserves, or National Guard including all branches of the U.S. military, i.e., Army, Marine Corps, Navy, Air Force or Coast Guard. Students are responsible for providing appropriate documentation. Refunds of institutional charges related to the deployment will be subject to approval of DigiPen's Board of Directors along with the COO Redmond and CFO. Tuition refunds are issued in accordance with this policy and the appropriate refund schedule.

Catastrophic Events and Natural Disasters

Refunds of institutional charges related to catastrophic events and natural disasters will be subject to approval by DigiPen's Board of Directors along with the Chief Operating Officer- Redmond and Chief Financial Officer. Refunds related to catastrophic events and natural disasters will be based on the availability of alternative instruction formats, date of occurrence, and other relevant factors surrounding the event, including guidance and recommendations from federal and state agencies. In the event that alternate modes of instruction or student support are not feasible with available means and resources, DigiPen shall refund student tuition on a pro rata basis for impacted courses that cannot be provided. In the alternative, if the duration and severity of the event or disaster is such that DigiPen can re-establish its programs within three months, DigiPen can provide reduced costs or free retakes of courses and programs cancelled as a result of the event or disaster. Student financial aid awards and disbursements may be subject to adjustments.

Other Events Impacting Completion of Instruction

In cases that are not a result of natural disasters or catastrophic events and where DigiPen cannot fully deliver the instruction for a single class or all classes for which a student has contracted, DigiPen will determine a reasonable alternative for delivering the instruction or reasonable financial compensation for the education that the student did not receive.

Special Circumstance and Appeals

Requests for special circumstance tuition refund appeals are typically accepted for medical and military-related withdrawals. Students may also request special consideration for reasons other than medical or military related. Students who would like to file an appeal against a decision regarding their tuition refund shall file a written request to the Accounting Department at mailto:accounting@digipen.edu. If dissatisfied with the decision of the Accounting Department, students may file a second appeal with the Chief Financial Officer.

Tuition Account Reimbursement

Reimbursement Requests

Except for excess Title IV federal student aid, any credit balance left on a student account is applied to future charges unless the student requests a reimbursement check by signing a Reimbursement Request Form. Excess Title IV federal funds are automatically released to the student and/or parent borrower under federal student aid regulations.

Reimbursement Check

A reimbursement check is made payable to the student, unless otherwise instructed by the student on the Reimbursement Request Form. A reimbursement check may be picked up from the Office of Accounting or mailed to the address specified on the Reimbursement Request Form. A reimbursement check may be issued within two to four weeks from the date the request was received or the credit balance appeared on the student account, whichever is later.

Inactive Student Accounts

Except for excess Title IV funds, any credit balance left on a student account that becomes inactive through graduation, withdrawal, or any other event is automatically reimbursed to the student within 60 days of the account's change of status. A reimbursement check is made to the student and mailed to the student's last-known billing address. If a student wishes to have the Institute return the credit balance to a lender of a federal or alternative student loan, the student must complete the appropriate paperwork with the Office of Financial Aid at the time of graduation or withdrawal from the Institute.

Termination Date

For refund purposes, the termination date for institutional withdrawal is the last date of actual attendance at the Institute by the student or the date of determination in accordance with the Institute's withdrawal policy. Similarly, the termination date for withdrawal from individual classes is the date of receipt of the appropriate withdrawal form. Notice of cancellation or withdrawal should be given by completing the appropriate withdrawal form, whether it is withdrawal from the Institute or from specific classes for which the student registered.

If the student's account remains delinquent for over 30 days, the Institute reserves the right to cancel the student's registration.

Special Cases

In the documented event of prolonged illness or accident, death in the family, or other special circumstances that make it impractical to complete the program in which the student is enrolled, the Institute shall make a settlement that is reasonable and fair to both parties. These will be determined on a case-by-case basis. Students may submit a request for consideration via email, to the Accounting Office at accounting@digipen.edu.

Application of Policy

Any monies due to the student shall be refunded within 60 days from the Date of Determination when the Institute determines that a student is considered as withdrawn or within 60 days from the receipt of payment or credit memo, in the event that the date of such receipt is occurred after the Date of Determination.

If a student's financial obligation is not fulfilled, the Institute is authorized to do the following until the owed monies are paid:

- Block the student's class registration for upcoming semester.
- Block the student's ability to re-enroll in DigiPen.

DigiPen's Institutional Refund Policy operates independently from the Return of Title IV Funds Policy required for Title IV federal student aid recipients.

Financial Assistance

The Role of the Office of Financial Aid

The primary objective of the Office of Financial Aid is to assist students and their families in meeting basic educational costs. The Office of Financial Aid's goal is to provide financial assistance to eligible students by utilizing all federal, state, community, and on-campus resources for those who qualify. We strive to provide comprehensive information about all financial aid programs and to deliver student financial assistance in a timely and efficient manner. DigiPen administers all financial aid programs in accordance with established federal, state, and institutional regulations and policies. Please contact the Office of Financial Aid or visit digipen.edu/financial-aid for the most up-to-date information on the policies and programs detailed below.

Federal Student Aid

Who Can Apply

To be eligible to apply for Federal Student aid, students must meet the following requirements:

- Be a citizen of the United States or an eligible non-citizen;
- Have a valid Social Security number;
- Be enrolled in a degree program
- Not owe a repayment on a grant or be in default on a student loan;
- Be making Satisfactory Academic Progress (if a returning DigiPen student).

For more information, please see the *Satisfactory Academic Progress* section.

Other types of financial aid, such as Veterans Benefits and Private Loans, have additional eligibility criteria.

How to Apply

To apply for Federal Student Aid, go to studentaid.gov/h/apply-for-aid/fafsa and complete the Free Application for Federal Student Aid (FAFSA). The FAFSA will be available October 1st of each calendar year. Please be sure to include DigiPen Institute of Technology federal school code: 037243. It is important to file the FAFSA as early as possible so that the student's financial aid award can be finalized and the academic year can be planned. Please know that some funds are limited and are awarded on a first-come, first-served basis.

Types of Financial Aid

Financial aid is available to those who qualify. Financial Aid is intended to pay for courses required to complete your declared degree and/or major. If you are planning to take courses that do not directly fulfill an academic degree requirement, contact the Office of Financial Aid to determine how your aid will be affected. For the most up to date information on types of aid offered, please check the Financial Aid Handbook on the DigiPen website.

Grants

Grants are a form of financial aid that do not need to be repaid and are typically awarded based on financial need.

Federal Pell Grant Program

The Federal Pell Grant program provides grants for low-income students as determined by the FAFSA. This need-based grant is only awarded to eligible undergraduate students pursuing their first undergraduate degree. Grants can be used for tuition, fees, and living expenses. The grant amount depends on the family's financial need and on the student's enrollment status. Students who have already earned a bachelor's degree, master's degree, or other professional degree do not qualify for Pell Grants.

Federal Supplemental Educational Opportunity Grant (FSEOG)

The FSEOG program provides grants for students whose FAFSA results indicate exceptional financial need. This need-based grant is awarded to undergraduate students who qualify and is based on FAFSA completion. Funds are limited for the program, and grants are made to Pell Grant recipients first.

Iraq and Afghanistan Service Grant (IASG)

The Iraq and Afghanistan Service Grant is a non-need-based grant available to any undergraduate student whose parent or guardian died because of military service in Iraq or Afghanistan after September 11, 2001. Recipients must either have been less than 24 years of age or enrolled in an institution of higher education at the time of their parent or guardian's death. If a student is not eligible for the Pell Grant, the IASG entitles the student to receive an amount equal to the maximum Pell Grant; if the student is eligible for a partial Pell grant, the IASG may qualify the student for an increase in funds up to the maximum Pell Grant.

Washington State Funding

Students who are residents of Washington state may qualify for additional need-based financial aid. To be considered a resident of Washington for this purpose, a student must have begun living in the state at least one calendar-year prior to their first day of attendance at any WA institution of higher education and must provide documentation to confirm they meet residency criteria.

Exceptions exist for specific circumstances, contact the Office of Financial Aid for more information.

Eligibility for WA Student Financial Aid requires students to complete the FAFSA. Students who are WA State residents but are not eligible to complete a FAFSA may still qualify and should complete the WASFA Application. For a full list of eligibility requirements and detailed information about the programs below, visit digipen.edu/financial-aid.

College Bound Scholarship

Students may use a Washington State College Bound Scholarship at DigiPen, if they applied for it in grades 7 and 8 and high school. The scholarship amount is predetermined by the state.

Opportunity Grant (Washington State)

The Opportunity Grant helps low-income adults reach the educational tipping point and beyond in high-wage, high-demand careers. This grant can be applied to tuition, fees, and allows a reimbursement of up to $1,000 per year for books and supplies. To qualify for this one-time grant, students must demonstrate financial need based on their FAFSA and submit a separate Opportunity Grant application. Funds are limited and eligible students are awarded on a first-come, first-served basis.

Assistance from Other States

There may be state grant availability to students who are residents of other states. Please check your state's local authorizing agency.

DigiPen Scholarships

Scholarships are a form of financial aid that do not need to be repaid. DigiPen Scholarships can be awarded based on merit or financial need or a combination of both. DigiPen offers need-based and merit-based scholarships. We are committed to helping students who exhibit financial need, and we recognize the importance of rewarding excellence. Some of DigiPen's scholarships require a separate application; visit our website for specific instructions at digipen.edu/scholarships.

Once you have been offered a DigiPen Scholarship you have to meet select eligibility criteria to receive the funds:

- Student must be a full-time matriculated/active student taking at least 12 credits as an undergraduate or nine credits as a graduate student to receive the full amount of the scholarship each semester.
- You must meet the standards of the Federal Financial Aid Satisfactory Academic Progress policy. SAP is checked after each semester. Students who are on Warning are still eligible to receive their scholarship.
- Your scholarship is only valid during the time period specified in your scholarship award letter. If you withdraw from any classes at any time, you may only be refunded for the tuition you paid and not for any of the tuition costs covered by this scholarship.
- Should you fail to attend DigiPen Institute of Technology during the semesters indicated on your scholarship award letter, your scholarships will be cancelled.
- For the most up to date information on types of scholarships offered, please view the Financial Aid Handbook or visit the website.

Veterans Affairs - The GI Bill®

The GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by the VA is available at the official U.S. government website at benefits.va.gov/gibill/.

For the most up to date and detailed information, please view the Veterans Affairs Benefits Handbook or visit the DigiPen Veterans Benefits website.

Veterans Benefits

Selected programs of study at DigiPen Institute of Technology are approved by the Washington Student Achievement Council's State Approving Agency (WSAC/SAA) for enrollment of persons eligible to receive Veterans Affairs (VA) educational benefits. The following VA educational assistance benefits are available at DigiPen:

- Chapter 30 (Title 38, U.S. Code)—Montgomery GI Bill® for Active Duty and Veterans
- Chapter 31 (Title 28, US. Code))—Veterans Readiness and Employment (VR&E).
- Chapter 32 (Title 38, U.S. Code)—Veterans Educational Assistance Program
- Chapter 33 (Title 38, U.S. Code)—Post 9/11 GI Bill®
    - DigiPen participates in the Yellow Ribbon program for those students who may be eligible.
- Chapter 35 (Title 38, U.S. Code)—Dependents of Disabled/Deceased Veterans
- Chapter 1606 (Title 10, U.S. Code)—Montgomery GI Bill® for National Guard & Selected Reserves

Eligibility for the various VA educational benefits programs is determined, in part, by the student's date of enlistment, and the student must be a degree-seeking student with a declared major at DigiPen. In all cases, the Department of Veterans Affairs makes the final determination of eligibility. Application forms for VA benefits are available at va.gov.

Prospective students who believe they might be eligible for VA educational benefits should contact DigiPen's Office of Financial Aid

for more information and to begin the application process. The Office of Financial Aid may assist veterans in seeking other sources of financial aid in addition to their VA educational benefits.

Certification

In order to start the initial certification process, students will need to provide the School Certifying Official with a copy of their Certificate of Eligibility (obtained from the VA), copy of DD-214 (if a veteran), and complete DigiPen's VA Benefits Certification Request Form.

The Office of Financial Aid will send out an email with the VA Benefits Certification Request Form attached each semester for completion. Submitting the VA Benefits Certification Request Form indicates a student's interest in being certified for the semester and confirms courses registered for count towards the student's degree program or declared minor.

Students will not be certified for the semester until the VA Benefits Certification Request Form is completed and signed by the student and their Student Success Advisor.

VA Benefits & Late Certification

All chapter 31 or 33 VA students who have submitted a copy of their Certificate of Eligibility to the School Certifying Official by the first day of classes will not receive a late fee, be denied access to classes, libraries, or other institutional facilities, have their account frozen or be required to cover any VA covered portion of their financial obligation due to delayed disbursement funding from the VA.

VA benefits must be certified within the first 30 days of the semester to ensure timely payment from the VA. Documents turned into the School Certifying Official after the 30-day deadline will be processed, but payment for that semester is at the discretion of the VA.

Loans

Loans are a form of financial aid that is borrowed and that must be repaid. An education loan is money borrowed to pay educational expenses.

Federal Direct Loan Program

This program is also referred to as the William D. Ford Federal Direct Loan Program. Eligible students and parents borrow directly from the U.S. Department of Education. Direct Loans consist of Subsidized and Unsubsidized Loans, Federal Direct PLUS Loans and Federal Direct Consolidation Loans. DigiPen Institute of Technology awards these loans, but students and parents repay them directly to the federal government.

Direct Subsidized Loans

This is a fixed-interest loan awarded to undergraduate students based on financial need as determined by the FAFSA. This loan is subsidized by the federal government who pays the interest on these loans while the student is enrolled more than half-time and during qualifying periods of deferment. Eligibility may be reduced if a student begins a program at another institution and transfers to DigiPen.

Federal Direct Unsubsidized Loans

This is a fixed-interest loan awarded to undergraduate and graduate students who complete a FAFSA, regardless of financial need.

This loan is unsubsidized during enrollment so interest will begin accruing immediately as funds are disbursed. Students can opt to either pay the interest as it accrues, or defer payment, in which case the interest is capitalized

Federal Direct Parent Loan for Undergraduate Students

This is a fixed-interest loan parents can obtain for their dependent undergraduate students if they have completed a FAFSA. These loans are unsubsidized, non-need-based loans awarded to parents of dependent undergraduate students. PLUS loans are capped at $20,000 per year. A separate application is required, and the borrower may not qualify if they have adverse credit history

Private Loans

Private Education Loans, also known as Alternative Education Loans, are student loans offered by private banks or other financial institutions. These loans are credit-based and may have variable interest rates. DigiPen Institute of Technology does not participate in any preferred lender arrangements, nor does it endorse any lenders.

Enrollment Requirements for Financial Aid Eligibility

Federal regulations set full-time enrollment for undergraduate students at 12 or more credits per semester. Full-time enrollment for graduate students is nine or more credits per semester or as required for the program. Both undergraduate and graduate students must be enrolled at least half-time to be eligible for Federal Student Loans. Undergraduate students' eligibility for Pell Grants, FSEOG, WA Student Financial Aid, and other grant and scholarship programs are determined in part by enrollment level. Changes in a student's enrollment may require adjustment and/or repayment of awarded financial aid funds.

Federal Return of Title IV Funds (R2T4) Policy

Financial aid funds are awarded to a student under the assumption that the student will attend DigiPen for an entire term. If the student officially or unofficially withdraws from DigiPen during the term, the student and school are required to return the unearned part of the federal funds back to the Department of Education. The calculation used to determine the amount of earned and unearned aid is called the Return to Title IV (R2T4) calculation.

For Official Withdrawals

- All federal aid is considered earned if the student remains enrolled and remains in attendance through at least the 60% point of the term in which federal aid is received.
- A prorated portion of the federal aid received must be returned according to the R2T4 formula if the student officially withdraws prior to completing 60% of the term.

For Unofficial Withdrawals

- A prorated portion of the federal aid received must be returned, according to the R2T4 formula using the 50% point of the term as the last date of academic activity if it is determined a student unofficially withdrew.

For the complete Return of Title IV Funds policy please refer to the Financial Aid Handbook.

DigiPen Study Abroad for Federal Student Aid Eligibility

Students must meet with the Office of Financial Aid to have their Study Abroad application approved before being accepted into the program.

Redmond students approved to Study Abroad may be be eligible for federal, state and institutional financial aid while they are abroad. Students will be registered in a dummy course for 12+ credits which will allow their aid to pay to their student account. Students must meet all other financial aid policies while abroad to maintain their financial aid.

Academic Opportunities

Waiver Credit, Advanced Placement and International Baccalaureate Examinations, CLEP

Students may apply for course waivers if they can demonstrate that their knowledge and skills—whether they were gained by formal education, exam, work experience, or life experience—are equivalent to those gained by courses offered at DigiPen Institute of Technology. Credit may be granted through other means: Advanced Placement (AP) and International Baccalaureate (IB) Exam scores, College-Level Examination Program (CLEP) subject exam scores, or transfer credits from other post-secondary institutions.

Course Waiver Examinations

Students may petition to waive designated courses by demonstrating sufficient mastery of the material. If approved, students may waive the requirement to complete a specific course. A course waiver does not result in credit earned and will not reduce the total number of semester hours required for a degree; however, it will increase the available number of elective hours for a degree. No grades or quality points are awarded.

To petition for a course waiver, students should take the following steps:

1. Contact their Student Success Advisor to discuss their degree requirements and course waiver process.
2. Submit a copy of their transcript and/or other supporting documentation (with relevant details highlighted) to the academic Department Chair. Supporting documentation may be a combination of prior academic coursework and relevant work experience in the subject area.
3. Successfully pass a course waiver examination at least equal in scope and difficulty to a final examination in the course (if required by the academic department). Waiver examinations may not be repeated.

If a course waiver is approved, the academic Department Chair will submit the approval to the Office of Registrar for processing. For waiver requests completed by July 1, students will receive notification by August 1. Waiver requests submitted after July 1 will be handled on a rolling basis, as faculty schedules allow. Results of waiver requests received after the July 1 deadline are not guaranteed to be available before the start of classes.

The following restrictions apply to all course waiver requests.

1. A student must be currently enrolled before a course waiver can be recorded on the permanent record.
2. A maximum of 15 credits may be waived.
3. Courses that were audited, repeated, or received a grade of “WF”, “F” or “NP” are ineligible for course waivers.

Advanced Placement (AP) Examinations

Course credit may be granted for a score of 4 or 5 on Advanced Placement (AP) Exams of the College Board according to the equivalency chart below. AP Exam must have been taken within the last 10 years and must have been taken prior to the student’s graduation from high school. Course credit is entered on a student’s transcript, but no grades or quality points are awarded. It is the student’s responsibility to have an official AP score report sent to DigiPen.

Accepted AP Scores and DigiPen Course Equivalents

AP Exam	Minimum Score	DigiPen Course	Credits
AP Research	4	HSS ELEC	3
AP Seminar	4	HSS ELEC	3
2D Art and Design	4	ART 105	3
Art History	4	ART 1000	3
Music Theory	4	MUS 120 & MUS 120L	2 and 1
English Language and Composition	4	ENG 110	3
English Literature and Composition	4	ENG 110	3
Comparative Government and Politics	4	HSS ELEC	3
European History	4	HSS ELEC	3
Human Geography	4	HSS ELEC	3
Macroeconomics	4	ECN 100	3
Microeconomics	4	ECN 100	3
Psychology	4	PSY 101	3
US Government and Politics	4	HSS ELEC	3
US History	4	HSS ELEC	3
World History: Modern	4	HIS 100	3
Biology	4	NS ELEC	3
Chemistry	4	NS ELEC	3
Environmental Science	4	NS ELEC	3
Physics 1: Algebra-based	4	PHY 115	3
Physics 2: Algebra-based	4	PHY 199	3
Physics C: Electricity and Magnetism	4	PHY 270 & PHY 270L	3 and 1

AP Exam	Minimum Score	DigiPen Course	Credits
Physics C: Mechanics	4	PHY 200 & PHY 200L	4 and 1
Calculus AB	4	MAT 150	4
Calculus BC	4	MAT 200	4
Computer Science A	4	CS 115	3
Precalculus	4	MAT 106	3
Statistics	4	MAT 105	3
Chinese Language and Culture	4	HSS ELEC	3
French Language and Culture	4	HSS ELEC	3
German Language and Culture	4	HSS ELEC	3
Italian Language and Culture	4	HSS ELEC	3
Japanese Language and Culture	4	JPN 101	3
Latin	4	HSS ELEC	3
Spanish Language and Culture	4	HSS ELEC	3
Spanish Literature and Culture	4	HSS ELEC	3

International Baccalaureate (IB) Examinations

Transfer credit may be granted for International Baccalaureate (IB) Exams that receive minimum scores according to the equivalency chart below. IB Exams must have been taken within the last 10 years and must have been taken prior to the applicant's graduation from high school. Applicants must request to have an official IB transcript sent to DigiPen from the International Baccalaureate (IB).

Accepted IB Scores and DigiPen Course Equivalents

IB Exam	Minimum Score	DigiPen Course	Credits
English A: Literature	5	ENG 110	3
English: Language and Literature	5	ENG 110	3
Language B (Multiple languages, including Classical languages)	5	HSS ELEC	3
Economics	5	ECN 100	3
Geography	5	HSS ELEC	3
Global Politics	5	HSS ELEC	3
History SL	5	HIS 100	3
History HL	5	HSS ELEC	3
Philosophy	5	PHL 150	3
Psychology	5	PSY 101	3
Social and Cultural Anthropology	5	HSS ELEC	3
World Religions	5	HSS ELEC	3
Biology	5	NS ELEC	3
Chemistry	5	NS ELEC	3
Physics	5	PHY 115	3
Mathematics: Applications and Interpretation HL	5	MAT 106	3
Mathematics: Analysis and Approaches HL	5	MAT 106	3
Mathematics: Analysis and Approaches HL	6	MAT 150	4
Music	5	MUS 161	3
Film	5	FLM 115	3
Visual Arts	5	ART 1000	3

College-Level Examination Program (CLEP)

Credit may be granted for CLEP Subject Examinations with a B-level score or higher only, according to the equivalency chart below. Exams must have been taken within the last 10 years and must have been taken prior to the applicant's completion of a total of 40 hours of college credit. Course credit is entered on a student's transcript, but no grades or quality points are awarded. It is the student's responsibility to have an official score report sent to DigiPen.

CLEP Subject Test	Minimum Score	DigiPen Course
College Composition	59	ENG 110
Introductory Psychology	55	PSY 101
Precalculus	61	MAT 106

Students should check with the College Board at collegeboard.org for further details and information concerning test centers and dates.

Student Internships

Overview of Internships for Credit

Student internships are monitored, on-site work or service experiences for which students earn credit. Students who meet the prerequisites and are in good academic standing are eligible for internships.

The internship usually takes place in a professional workplace under the supervision of an experienced professional, whereby a high degree of responsibility is placed on the student. Internships can be part-time or full-time and must be paid. Internships must be approved in advance by the Institute.

General Information Regarding Internship Programs

Through an internship program, students establish and meet intentional learning goals through actual product development experience, while actively reflecting on what they are learning throughout the experience. The goals for the internship may include:

- Academic learning—applying knowledge learned in the classroom to tasks in the workplace.
- Career development—gaining knowledge necessary to meet minimum qualifications for a position in the student's field of interest.
- Skill development—an understanding of the skills and knowledge required in a specific job category within the industry.
- Personal development—gaining decision-making skills, critical thinking skills, and increased confidence and self-esteem.

Since internships have a strong academic component, students are carefully monitored and evaluated for academic credit. Internships may vary in duration but generally last for one semester (3-4 months) and credit is granted based on 45 hours of internship per credit. For example, 4 credits (180 hours) and 3 credits (135 hours). Typically, students may replace two semesters of their respective program's projects courses. Please refer to individual program requirements for more information.

More detailed information about student internships can be found in the Internship Guidelines located in Handshake's "Resource Library". For further questions about internships, please contact Career Services at careerservices@digipen.edu.

Minors

To obtain a minor at DigiPen, students must apply for the minor via the Minor Request Form and satisfy criteria prescribed by the department awarding the minor.

- At least nine of these credits must be earned at DigiPen.
- All credits must be earned with a grade of "C-" (1.7) or better.
- Students may only receive minors outside of their major focus of study.
- Courses that do not satisfy degree requirements are not eligible for Title IV financial aid. Please contact your Financial Aid advisor for more information.
- Freshmen may not apply for minors.
- Students may not apply for a minor if they cannot complete it before or concurrent with their undergraduate graduation.
    - Minor requirements must be completed at the same time as degree requirements or before. If not completed, the minor request will be automatically removed and will not be awarded.
    - No minor will be granted retroactively.
- If a student withdraws from the Institute, they will be removed from both their major degree program and minor.
    - Must reapply to both upon attempting to return to the Institute.

Distance Education

DigiPen offers some classes within the current degree programs via distance education in the event that students and faculty cannot be in the same location at the same time. Not all classes are offered via distance education every semester. Please check with the Office of the Registrar regarding the availability of online classes for future semesters. Residential programs at DigiPen require in-person participation. Virtual or online participation of residential (in-person) classes is not permitted, except during emergency situations (e.g. weather based closures). Courses designated as hybrid or online may include streaming or other virtual and online elements.

Delivery System

DigiPen uses an online Learning Management System (LMS) to support course content and online interaction. The course syllabus, assignments, gradebook, announcements, and additional resources are hosted in the LMS.

Online class sessions are conducted via video teleconferencing software that enables synchronous communication by video, voice, chat, screen sharing, and other collaborative tools. Academic activities are tracked via the online Learning Management System for each course.

The LMS and teleconferencing software also support asynchronous work such as chat, shared documents, resources and collaborative spaces.

Admissions Requirements

DigiPen offers all programs via residential modality with a limited number of courses offered via distance education. Accordingly, the Institute continues its admissions practices for all programs.

Prerequisites for Participation

Students are required to complete an Online Learning Readiness Self-Check (OLRSC) to confirm their aptitude for distance education. This assessment includes questions designed to determine students' familiarity with online learning technologies and techniques, communication and collaboration styles, and digital literacy.

Students are required to affirm they have the equipment and internet access necessary to succeed in distance education.

DigiPen offers all newly enrolled students access to Student Success Modules for Online Learning and ongoing support as needed.

Technology and Equipment Requirements

1. A headset (headphones and a microphone that reduces background noise)
2. A webcam that supports HD video
3. A computer that meets the following minimum specifications:
    1. Intel i7 processor
    2. 32 GB of RAM
    3. NVIDIA (not AMD) video card with at least 8 GB of VRAM
    4. 1 TB storage
    5. 2+ USB 3.0 Ports
    6. 1+ HDMI Ports
4. Windows 11 Home (not macOS, Linux, or Chromebook)
5. A stable, reliable internet connection that supports 10 Mbps or higher downloads

Expected Learning Outcomes

DigiPen's degree programs offered through residential and distance education have the same expected learning outcomes.

Student Services

DigiPen offers comparable student services to resident students and distance education students. The modes of delivery of these services may be conducted via video conferencing, phone, or e-mail.

Learning Resource System

DigiPen's Learning Resource Center (LRC) allows students and faculty to gain access to 10 databases through OneSearch by going to the main library web page, digipen.edu/library. The web page also has a list of resources available to students as well as library services forms, library policies, and contact information for both the library and the Academic Support Lab. Students taking online classes have the same level of access as residential students.

Resources beyond those held by the LRC will also be made available to distance education students. Inter-library loan is available via online request form to grant access to articles and books drawn from hundreds of other libraries around the world.

Reference services are available via email library@digipen.edu, and Teams online meetings. Equipment needed for specific classes are required for all students to purchase or are provided for students via an equipment fee.

Special Considerations

Independent Study Policy

An independent study course is an alternative form of course delivery, requiring a high level of self-directed learning, with minimal assistance from the instructor. Independent study courses offer the student an opportunity to learn more about a specific subject, outside of the formal classroom, with scheduled one-on-one interaction with the instructor. These activities may be experiential, directed reading, or independent research supervised by a faculty member and approved by the chairperson of the department under which the course is listed. If the department chair is the faculty member offering the independent study, then the study proposal must be reviewed and approved by the Academic Dean.

Independent study courses do not replace existing courses, nor are they necessarily Special Topics courses. Either existing courses or special topics courses may be offered as independent study in the right circumstances.

An independent study may not be used for resolving scheduling conflicts or making up failed classes. The department chair and faculty member will determine the number of students and credit hours that the instructor can supervise for independent study every semester. The total number of credits for an independent study may not be altered after the course is in progress.

The number of credits awarded by the course should be one semester credit hour for each 40 clock hours of documented independent study activities. Students may take up to 6 credits of Independent Study per semester; however, Independent Study credits are limited to less than 10% of the total credits required for the degree program in which they enrolled.

Minimum Requirements

Although it is at the discretion of each academic department to provide more rigorous and specific guidelines as deemed fit, the following minimum criteria must be met to ensure the overall outcomes of the educational experience, the success of the students, and compliance with the accreditation standards:

- Undergraduate Students who take independent studies must have a minimum cumulative GPA of 2.0 and must complete a minimum of 30 credits before taking the Independent Study.
- Graduate Students must have a minimum cumulative GPA of 3.0 before taking an Independent Study.
- The independent study must include comprehensive objectives in a written proposal, a reviewed and approved syllabus, and promote a high level of self-directed learning.
- The student must interact with the instructors throughout the course, via a scheduled weekly meeting.

Grade Changes and Appeals

Only the faculty member who administered the grade may make grade changes. In cases where the faculty member is not available to consider a grade change, the Dean of Faculty, may make such a change. See *Grade Appeal Process* for more information.

Non-Degree Seeking (NDS) Policy

Application Process

- To apply for NDS studies at DigiPen, complete an Application for Admission.
    - Applicants who intend to take undergraduate level courses should apply as an Undergraduate NDS student.
    - Applicants who intend to take graduate level courses should apply as a Graduate NDS student.
- NDS Applicants must provide proof of graduation
    - Undergraduate NDS Applicants must provide official transcript indicating evidence of graduation from high school, and if applicable, official transcripts from all post-secondary institutions.
    - Graduate NDS Applicants must provide official transcript indicating evidence of graduation from a college/university.
    - Applicants should have a recommended minimum 2.5 cumulative GPA in their most recent studies.
- Non-native English speakers must provide Proof of English Language proficiency.
- Students may select a degree program track, and additional corresponding materials may be required.

Admitted NDS Students

- Students must pass prerequisite courses before they are able to register for courses with prerequisite requirements or obtain an approved prerequisite override form from the instructor.
- Admittance to a course is determined on a course-by-course basis; not all courses are available for NDS students.
- Undergraduate students must maintain a minimum 2.0 GPA to remain enrolled as a NDS student.
- Undergraduate students must receive a minimum passing grade of ‘C-‘(1.7 quality points) in each course.
- Graduate students must maintain a minimum 3.0 GPA to remain enrolled as a NDS student.
- Graduate students must receive a minimum passing grade of ‘C’ (2.0 quality points) in each course.
- Enrollment will continue unless a student does not register for classes for either Fall or Spring.

Financial Aid

Financial Aid is not available to NDS students.

Restrictions

- DigiPen students on academic or conduct suspension/ withdrawal or other warning/probation are not eligible for NDS studies until the conclusion of the warning/probationary period.
- NDS students are not guaranteed acceptance into any of the DIT Degree Seeking programs, and must meet all requirements, apply, and be accepted.
    - Transfer credit limit for undergraduates is 50% of the total required degree program credits.
    - Courses must meet all DIT transfer credit requirements to be honored.
- Transfer credit limit for the MFADAA program is 15 credits. Transfer credit limit for the MSCS program is 12 credits.
    - Courses must meet all DIT transfer credit requirements to be honored.
- Courses taken in NDS studies do not lead to a degree and are not applicable to earning a professional certificate from DigiPen.

Course Overload

During a given semester students may be enrolled in a maximum of 21 credits. Students seeking special permission to take more than the maximum credits in a given semester should use the Course Registration Override Request Form and get approval from their Student Success Advisor.

Make-up Work

The DigiPen Institute of Technology understands that students are occasionally unable to complete work due to legitimate and unplanned disruptions. Each course will provide opportunities to make-up learning outcomes in a way that makes sense within the structure of that course.

This may include allowing late work for excused absences, makeup labs, allowing more opportunities for assessment than are required for the course, or other intentional structures to support student success and resilience. For details specific to each course please refer to course syllabi and contact your instructor.

In some cases, for some amounts of missed instruction and work, make-up work will not preserve the integrity of the educational experience. In these cases a student should contact their Student Success Advisor to discuss other possible pathways.

Institutional Attendance Policy

Documented Academic Activity and Attendance

Federal regulations require the institute to document that each student has begun participation in all enrolled courses, and to fully document student academically related activities. If there is no documented academic activity within Moodle for the first two weeks of the semester, the student will be withdrawn from the course.

Note: Although DigiPen Institute of Technology does not officially track attendance in class as a policy, instructors have the purview to decide if their own course sections will or will not require attendance. If the instructor decides to require attendance, they will document policies and procedures in the course syllabus.

Leave of Absence (LOA) Policy

DigiPen undergraduate programs are designed as 4-year programs, the MFADAA program is designed as a 2-year program, and the MSCS program is designed as a 1-year program. However, there are situations which may make it necessary for a student to seek a voluntary Leave of Absence (LOA). In such cases, students are allowed a one semester leave of absence.

Two Types of LOA

1. Standard LOA
2. Hardship LOA (HLOA)

Details

Standard Leave of Absence (LOA)

- Students may not take LOA during their first two semesters.
- Limited to one semester (Fall or Spring) and will automatically terminate at the end of the semester in which it is taken.
- Must be requested no later than two weeks before the current semester's end, for LOA to begin in the following semester.
- International students must seek approval from the ISA Department if the next available semester is more than 5 months out.

Hardship Leave of Absence (HLOA)

- Limited to one semester (Fall or Spring) and will automatically terminate at the end of the semester in which it is taken.
- May be requested and approved during the semester of the HLOA.
- Has the same requirements and conditions as a Hardship Withdrawal (HW), except that students don’t have to reapply as they would if they fully withdrew from the school.
- If student still has the same hardship situation at the end of the HLOA semester, they will be required to take a full Hardship Withdrawal and then apply for readmission once the situation is corrected.

Details

- Once a LOA/HLOA is approved and the semester classes begin, the LOA/HLOA must be completed (may not come back mid-semester).

- As LOA and HLOA are limited to 1 semester, they will automatically terminate at the end of the semester.
- Federal regulations limit LOA/HLOA to 180 days (including all holidays) within a 12-month period. Students who exceed 180 days of cumulative leave will be administratively withdrawn.
- The Institute's refund policy will be applied in accordance with applicable and published requirements.
- Students are not required to take or maintain a LOA/HLOA for Summer. As DigiPen does not require Summer semester for our programs, we will not require them to take LOA during that semester. However, we will require students who are on LOA to register for classes in the required semester that follows the LOA, and will have them sign a letter of intent to return in that next required semester.
- Financial Aid and Scholarships may be affected by taking a LOA/HLOA. No LOA/HLOA will be approved without the student first meeting with a Financial Aid representative.
- Students on an approved LOA/HLOA will have their institutional financial aid held for them if they return within the approved timeframe.
- Students taking a HLOA will be considered a withdrawal for Title IV Financial Aid purposes and will be subject to a Return of Title IV calculation for the semester from which they are taking the HLOA.
- Immigration status may be affected for international students taking a LOA/HLOA. No LOA/HLOA will be approved without the student first meeting with the International Student Affairs representatives.
- Student Accounts may be affected by taking a LOA/HLOA. Students must meet with an Accounting Department representative to review their accounts and obtain approval. No LOA will be approved with a past-due balance.
- If students don't return within the LOA timeline, they are administratively withdrawn and must reapply.
- Students must move out of Housing if they are granted an LOA/HLOA.
- Students undergoing Conduct Investigations may not take an LOA/HLOA.
- Students must register for classes in the semester following the LOA/HLOA semester. Students must complete this registration no later than 2 weeks prior to the end of the LOA/HLOA semester. If they do not register for classes in the semester following the LOA/HLOA, they will be administratively withdrawn from the institution.
- Students may not participate in any club activities or be on campus while on LOA/HLOA.
- Students may not graduate while on LOA/HLOA, as they must be active in our system and complete their course in the graduating semester.
- Students may not start a Change of Major (COM) in the same semester as an LOA or HLOA.
    - If a student receives an approval for a COM request, the student must attend classes in the semester immediately following the COM approval or that approval will be cancelled, and student must reapply for the COM.
    - If student has received a COM but intends to take an LOA in the first semester of the COM, the COM will be cancelled, and they must reapply for a COM to begin the semester immediately following the LOA.
    - If a student is currently on an LOA, they may apply for a COM, to be effective in the semester they return from the LOA. If the COM is approved while they are on LOA, they must register for and attend the classes for the new major in the semester immediately following the LOA (the start of the COM).

Process

- Student meets with their SSA to request the LOA form and obtain their signature (required).
    - HLOAs require a personal statement and supporting documentation for the request
- Form must be processed and approved by all of the following departments:
    - Financial Aid Department
    - Accounting Department
    - International Student Affairs Department (for International Students)
    - Housing Department (if student is living in DigiPen Housing)
    - Human Resources (if student is employed at DigiPen)
    - Office of the Registrar
- Student is informed of approval or denial, and of any specific deadlines or future requirements.
- Student must register for classes for upcoming semester (Fall or Spring), no later than 2 weeks prior to the end of the LOA semester.

Documentation of Academic Activity Policy

DigiPen Institute of Technology is a non-attendance taking institution; however federal regulations require the institute to document that each student has begun attendance in all enrolled courses and further documentation of student academically related activities. If there is no documented academic activity within Moodle for the first two weeks of the semester, the student will be withdrawn from the course.

As such, DigiPen Institute of Technology requires documentation of academic activity in the following ways:

- Academic activity is considered documented only if entered as an assignment in Moodle, the Learning Management System (LMS),
- All graded course assignments must be documented in the LMS,

- At least one academic activity must be documented in the first or second week of the semester.

Withdrawals (Initiated by Student)

From Individual Courses

To withdraw from individual courses, a student must use Colleague Self Service (CSS) or seek assistance from their Student Success Advisor.

From the Institute

To formally withdraw from the Institute, a student must submit a completed Institutional Withdrawal form obtained through their Student Success Advisor. Students may indicate on their Institutional Withdrawal form if they would like the withdrawal to be processed immediately or after final grades of the current semester have been issued. For students indicating that they would like to withdraw immediately, their LDA will be the date they sign their Withdrawal Form

Hardship Withdrawal

Students may seek a Hardship Withdrawal (HW) when one of four conditions prevents the student from completing one or all courses: death of a close family member; severe/terminal illness in the family; a physical or mental health issue incapacitating the student; significant life altering event. Hardship withdrawals may be sought any time during the semester, but not after all materials for a course have been completed (i.e. after submitting the final exam or final assignment). Students should meet or consult with their Student Success Advisor and complete the HW form to apply.

Unofficial Withdrawals

At the end of the term, students who receive all failing grades will be evaluated to determine if they earned their grade or ceased attendance prior to the end of term without completing the official withdrawal process. If it is determined that a student ceased attendance, the 50% point of the semester will be used as their last date of academic activity. This date will be used to withdraw the student from the term. Students will be subject to the Financial Aid Return of Title IV policy.

Administrative Withdrawals (Initiated by the Institute)

Students will be Administratively withdrawn from the institute if they:

1. Fail to maintain satisfactory PACE, while on Academic Warning.
2. Fail to maintain the minimum required GPA while on Academic Warning.
3. Fail to pass a class on the 4th attempt while on Academic Warning.
4. Fail to complete their program within 1.5 times the credit hours required to complete the program while on Academic Warning.
5. Violate the Code of Student Conduct and/or DigiPen's policies.
6. Fail to maintain matriculated/active status by not registering for any courses in either the Fall or Spring semesters
7. Are not able to begin the withdrawal process or otherwise notify DigiPen of the intent to withdraw due to illness, accident, grievous personal loss, or other circumstances beyond the student's control then an administrative withdrawal is processed.

WF Withdrawal

After the deadline for W grades in a given semester, if a student is found to have zero Academic Activity in a class, they will be withdrawn from the class and assigned a WF grade.

The WF grade carries the same Cumulative GPA and PACE effects as an F grade.

If a student receives WF grades (after the set date) in all classes of a required semester, the student will be fully withdrawn from the institution.

Involuntary Academic Withdrawal Appeal Process

Students may be involuntarily academically withdrawn from DigiPen for several reasons including grade point average (GPA), PACE (Percentage of Attempted Credits Earned), not achieving passing grades in enough courses at the rate of attempt: 67%+, and other factors. Student Success Advisors review a report at the end of each semester and determine students that meet the relevant criteria. Students may submit appeals materials to Vice President for Student Engagement within two working days of their initial letter.

Students who do not have their initial appeal granted may apply for readmission to DigiPen after one full semester of suspension (Fall, Spring, Summer). Withdrawn students applying for readmission must include a request to the Academic Appeals Committee with their readmission materials.

Appeal/Readmission materials should be comprised of a letter or video stating the reason(s) for a request and supporting documentation. Supporting documentation could be transcripts from another institution showing academic progress during the semester the student was not enrolled at DigiPen, documentation of personal or professional accolades, statement of change of behavior or circumstance or something similar. All documentation should be given to the Vice President for Student Engagement.

The Academic Appeals Committee is comprised of members from the Academic Affairs, Student Affairs and Enrollment divisions and the

Chief Operating Officer of the Institution and will evaluate the students' records and appeal materials. Members of Academic Affairs will be chosen based on student program and other factors that require their unique insights. The Committee members will advise the Chief Operating Officer on desired outcome of the appeal however, the Chief Operating Officer will make the final decision. The vote on each candidate will be recorded. The committee is chaired by the Vice President of Student Engagement. The levying of the decision is completed by the Chair.

The Committee will meet following grade submission each semester and review pending appeals for withdrawal and readmission. A vote will be completed, per student, following the review of the materials by the designated committee for each student. Notice of the decision must be provided to the student within three working days following the committee meeting.

The "W" Grade

If a student withdraws from individual classes or the Institute, please note the following:

1. If withdrawing before the end of the second week of instruction, no course entries will appear on the student's transcript for that semester.
2. If withdrawing after the end of the 14th calendar day of the semester and before the end of the 8th week of the semester, the Office of the Registrar will assign a final grade of "W" for each course in which the student was enrolled.
3. After the 8th week of the semester, students who withdraw themselves or are academically or administratively withdrawn by the Institution (other than Hardship and Military Duty) will receive a "WF" grade for each applicable course.

Dean's Honor List Requirements

Prepared at the end of each fall and spring semester, the Dean's Honor List officially recognizes and commends students whose semester grades indicate distinguished academic accomplishment. Both the quality and quantity of work done are considered. Students must meet the following qualifications to be a recipient of this honor:

1. Students must be matriculated/active.
2. Students must be registered full-time in credit-bearing courses during the fall or spring semester.
3. Must be a full-time student, and complete 12 or more graded credits (no Pass/No Pass) in one semester.
4. Only passing grades (4.0 [or "A"], 3.0 [or "B"], and 2.0 [or "C"] and 1.7 [or "C-]) in credit-bearing courses are counted for eligibility
5. No failing grades: a grade of "D" (or 1.0 quality points), and "F" (or 0 quality points) in any course makes the student ineligible, regardless of other grades.
6. Minimum GPA of 3.5 is required.
7. Any courses that do not count towards the degree are excluded.
8. AP and Internship credits are excluded.
9. Pass/No Pass credits are NOT counted when calculating qualifying credits.
10. "Incomplete" grades will be evaluated after they are made up. The student must have qualified for the Dean's Honor List before and after the "Incomplete" grade was made up.

The student's cumulative grade-point average is not considered; only the grade-point average for that semester is relevant.

Graduate Course Retake Policy

This applies to a student, not participating in the 4+1 Accelerated Program, who has passed an undergraduate (UG) course previously in a DigiPen bachelor's program. These are the situations in which they would either be allowed or be denied a retake of the graduate (GR) level course in the master's program.

1. Student fails course as an undergraduate. Undergraduate credit not received.
    - No graduate waiver granted.
    - The student must retake as a graduate student to receive graduate credit.
2. Student earns a C or better as an undergraduate. Undergraduate credit received.
    - Credit granted through 4+1 program if student is eligible. Otherwise, graduate waiver granted (up to 12 credits).
    - Student may not retake this course at the graduate level.
3. Student earns a C- as an undergraduate. Undergraduate credit received.
    - No graduate waiver granted.
    - Passing grade for an undergraduate, not for a graduate student.
    - The student must retake the course as a graduate student to receive graduate credit.

Process

1. Student takes the cross-listed course at the UG level.
2. Student is accepted into the GR level program.
3. Office of the Registrar does a degree audit after the admission into the GR level program and checks for any cross-listed classes that would fall into this category.
4. Decisions are made based on the policy above, and waivers are processed as needed.
    - Note: There may be cases in which a course substitution is a better way to go, and if so, that will be decided by the Program Director and the Office of the Registrar.

Process for Grievances and Appeals

Appeal of Course Grade

Students who would like to file an appeal against a decision regarding their academic standing in a particular course should discuss the matter with their instructor. If a satisfactory resolution is not attained, students may file an appeal with the Dean of Faculty by sending the Grade Appeal Form and corroborative documents to academic.affairs@digipen.edu. Students may appeal grades no later than two days after grade reports are issued. DigiPen reserves the right to destroy any examination papers after the appeal period. However, academic records will be kept indefinitely.

Appeal of Academic Suspension

Students must submit their academic withdrawal appeal within two business days from the time they receive their academic suspension email in their DigiPen email account.

Appeal for Refund of Tuition

Students who would like to file an appeal against a decision regarding their tuition refund shall file a written request to the Accounting Department. If dissatisfied with the decision of the Accounting Department, students may file a second appeal with the Chief Financial Officer.

Other Disputes

Students who feel that they have any other type of dispute with the Institute should first try to address the issue with the person or department they are having the issue with. If the student is unable to resolve the issue directly with the individual or department they are working with, then they may reach out to the Vice President of Student Engagement for student concerns or the Dean of Faculty for academic/faculty concerns.

If the student is still not satisfied with the decision, they may file an official complaint to the Chief Financial Officer (for finance-related issues) or the Chief Operating Officer (for all others). A copy of this complaint shall be given to those involved with the dispute. Once the decision of the Chief Operating Officer is determined, students may submit a final appeal by contacting the President of the Institute.

Filing a Complaint with an External Party

A student may file a complaint with an external party should they feel that the Institute has not adequately addressed a complaint or concern after they have followed the institute's Process for Grievances and Appeals.

Washington Student Achievement Council

The Washington Student Achievement Council (WSAC) has authority to investigate student complaints against specific schools. WSAC may not be able to investigate every student complaint. Visit wsac.wa.gov/student-complaints for information regarding the WSAC complaint process.

Student Complaint Procedure

Schools accredited by the Accrediting Commission of Career Schools and Colleges must have a procedure and operational plan for handling student complaints. If a student does not feel that the school has adequately addressed a complaint or concern, the student may consider contacting the Accrediting Commission.

All complaints reviewed by the Commission must be in written form, and should grant permission for the Commission to forward a copy of the complaint to the school for a response. This can be accomplished by filing the ACCSC Complaint Form. The complainant(s) will be kept informed as to the status of the complaint as well as the final resolution by the Commission. Please direct all inquiries to:

Accrediting Commission of Career Schools and Colleges
2101 Wilson Boulevard.
Suite 302
Arlington, VA 22201
Tel: (703) 247-4212
www.accsc.org | complaints@accsc.org

A copy of the ACCSC Complaint Form is available at the Institute and may be obtained by contacting Mandy Wong, Vice President of Compliance and Regulatory Affairs via compliance@digipen.edu, and may be obtained by contacting complaints@accsc.org or www.accsc.org/Student-Corner/Complaints.aspx.

If students are unsure of whom to speak to regarding a complaint, they may contact Mandy Wong at the following address:

Mandy Wong
Vice President of Compliance and Regulatory Affairs
DigiPen Institute of Technology
9931 Willows Road NE
Redmond, WA 98052
Tel: (425) 558-0299
Email: compliance@digipen.edu

Grade Appeal Process

1. Students who would like to dispute their final grade should first contact and discuss their concerns with the instructor of that course. If a satisfactory resolution is unattainable, the student may file a grade appeal.
2. Students must submit their grade appeal within two business days from the final grade posting date (typically the Tuesday after finals week). Failure to check grades until a later date is not an acceptable reason to delay the grade appeal process.
3. Appeals must be submitted to academic.affairs@digipen.edu. Appeals will be reviewed by the Dean of Faculty (or designee).

4. To be considered for an appeal the student must explain, in writing, any procedural error or omission that impacted their academic performance during the course such as substantiated bias or material deviation from established procedures.
5. The student's appeal will be reviewed by the Dean of Faculty (or designee) and a decision and response will be sent to the student's DigiPen email account within three business days of the date the appeal was received.
6. If the appeal is granted, the student's course grade will be updated. If the appeal is denied, the student's course grade will remain unchanged. The decision may also be remanded to the course instructor with additional direction.

Transcripts

DigiPen has teamed up with National Student Clearinghouse as our transcript ordering service.

Official transcripts are requested through National Student Clearinghouse. Requestors will be asked for payment via a credit or debit card.

Unofficial transcripts can still be generated through Colleague Self Service (CSS) by students in Colleague SIS. Students who are not in Colleague SIS must use National Student Clearinghouse to request an official transcript (no unofficial version is available).

Notifications about requested transcript as well as tracking are available. Requestors will receive email notifications once a request is submitted and have the ability to log in to track progress on the request. Requestors also have the ability to opt in to receive text message notifications.

Please contact the Office of the Registrar with any questions regarding ordering transcripts at registrar.us@digipen.edu.

Please contact National Student Clearinghouse with any technical issues at transcripts@studentclearinghouse.org.

Exams

All students are required to be in attendance at the times scheduled by the Institute for final exams. Instructors are not required to make arrangements for individuals to take final exams at a different time than the rest of the class. Should a student miss an exam, it is the student's responsibility to notify the instructor in writing within 24 hours of the missed exam. In the event that a student fails to provide such notification to an instructor, or if the Institute does not find the reasons for missing an exam justifiable, the student will be given a failing grade for the exam(s).

If a student misses a final exam and notifies the instructor within 24 hours of the missed exam, the Instructor shall review the individual circumstances. Only documented emergencies will be considered acceptable reasons for missing exams. Exam retakes shall be allowed at the sole discretion of the Instructor and Department Chair. If allowed, the exam retake must be completed prior to the official deadline for semester grades. Examples of unacceptable reasons for missing an exam include the demands of a time-consuming job, the desire to leave town for a vacation or family gathering, the desire to do well on tests in other courses, etc.

A retaken exam shall be different than the original one taken by the other students of the class, and the timing of it shall be at the sole discretion of the individual instructor. In all cases, retakes shall be administered no later than one week after the original, missed exam.

Student Services

Academic Support Lab

Peer tutoring is available online and in-person for most 100- and 200-level courses in the Academic Support Lab located in the Wing. The current schedule and a list of covered subjects can be found on the Academic Support Lab Teams channel. For further information please contact us via email, tutors@digipen.edu, or message tutors directly on the Academic Support Lab Teams channel.

Student Affairs

The Office of Student Affairs provides services to all degree- seeking students in order to support their academic, professional, and personal development. The Student Handbook provides information on the services and procedures that a student will need in their life at DigiPen and beyond, including:

- Student Success Advising
- Campus Life
- Housing and Residence Life
- Career Services
- Counseling Services
- Disability Support Services
- International Student Affairs & Study Abroad
- Student Activities & Organization
- Student Programs
- First-Year Seminar
- New Student Orientation

Student Success Advising

Each degree-seeking student is assigned to a Student Success Advisor (SSA) upon matriculation into their degree program at DigiPen. SSAs specialize in supporting students through setting and working towards academic goals. Students should see their SSAs about issues related to academic and school policies, scheduling and course selection, Course Registration Override Request forms, alternate schedules, degree audits and graduation, classroom success, mentoring, and referrals to other resources. Students are especially encouraged to meet with their SSAs prior to making changes to their course timelines in Colleague Self-Service.

It is recommended that students meet with their Student Success Advisor at least once a year and when applying for graduation. This ensures that students are enrolling in the correct classes and are making satisfactory academic progress through their degree program. For additional advising information, please contact mailto:studentsuccess@digipen.edu.

Career Services

DigiPen's Career and Alumni Relations staff provides a variety of resources for matriculated/active degree-seeking students to jumpstart their professional development before they graduate and transition into the industry. These resources include facilitated events for students and alumni to meet and interact with industry professionals, online tools and on-campus facilities to connect with prospective employers, and professional development workshops. Additionally, students have access to one-on-one appointments with a Career and Alumni Relations staff member to review application materials (e.g., resumes, cover letters, portfolios) and discuss various career development strategies.

The Career and Alumni Relations staff coordinates a variety of on-campus events for students. For example, Career and Alumni Relations arranges for recruiters to meet with all students to offer insight into their companies, review resumes and student work, and interview potential hires, as well as provide Company Day presentations and mixers. Career and Alumni Relations also hosts annual career events for students interested in internship and full-time job opportunities. The Career and Alumni Relations staff works closely with faculty to host guest lectures by industry professionals on campus, as well.

DigiPen's Career and Alumni Relations staff maintains Handshake, an online database of jobs, employers, posts available career opportunities for students and alumni through exclusive and active social networking groups. The Career and Alumni Relations staff also attends industry events such as the Game Developers Conference, to promote the Institute's programs and students. For further information, please email the Career and Alumni Relations staff at careerservices@digipen.edu. Please note that employment upon graduation is not guaranteed, nor is DigiPen obligated to secure employment on behalf of students.

Disability Support Services

DigiPen Institute of Technology ("DigiPen") is committed to providing equal access to all of its programs, courses, activities, events, and services. As required by the Americans with Disabilities Act of 1990 (the "ADA") as amended and Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112) as amended (P.L. 93- 16), DigiPen will provide reasonable accommodations to qualified students with disabilities.

DigiPen's Disability Support Services Office ("DSS Office") and its staff are appointed by the President of DigiPen to practice the authority to review student documentation and determine the needs for any reasonable accommodations to be provided by DigiPen to ensure

equal access. Wherever possible, reasonable accommodations will be offered provided they neither fundamentally alter the nature of the programs or the academic requirements that are considered essential to the program of study, nor create an undue hardship for DigiPen.

DSS Office staff will engage in a collaborative effort with students to assure equal access for students with disabilities. The DSS Office will also work with departments, faculty, and staff in the broader DigiPen community to prevent and eradicate discrimination on the basis of disability.

Current and prospective students who would like more information on DSS should contact the DSS Office at dss@digipen.edu.

Counseling Services

DigiPen Counseling Center provides resources to students dealing with a variety of personal issues, from short-term individual counseling to crisis intervention. All services offered by the DigiPen Counseling Center are overseen by Washington state-licensed mental health counselors and are completely free to DigiPen students. Current and prospective students who would like more information on DigiPen's counseling services should contact the center by emailing mailto:counseling@digipen.edu or calling (425) 629-4859.

Alumni Relations

The Institute maintains a database of all graduates, and DigiPen alumni are encouraged to report back regarding changes to their professional status. DigiPen hosts annual alumni events, as well as other networking and community building events for alumni to connect with one another. DigiPen also provides career resources post-graduation and encourages alumni to remain connected with the DigiPen community.

The Alumni Audit allows graduates of DigiPen Institute of Technology to take courses tuition-free within 10 calendar years of graduation (administrative fees apply). Participating alumni must review and sign an Alumni Audit Enrollment Agreement prior to attending courses. Alumni of DigiPen's undergraduate programs who are pursuing a DigiPen master's degree may not participate in the Alumni Audit while actively enrolled in their DigiPen master's degree.

Housing and Residence Life

DigiPen Housing and Residence Life, offered by DigiPen Housing, LLC,* is more than just a place to sleep — it's a community that supports students as they adapt to DigiPen's challenging academic environment. Our mission is to equip residents with basic life skills and foster a sense of community while supporting their academic pursuits.

DigiPen Housing and Residence Life is a great option for students who are living away from home for the first time. DigiPen Housing strives to host a supportive and welcoming living environment and offers management and housing services that allow students to focus on their studies.

DigiPen Housing and Residence Life offers apartment-style housing to a limited number of undergraduate and graduate students, as well as those enrolled in summer courses at DigiPen or Singaporean students participating in the Overseas Immersion Program. Assignments are based on application deadlines and availability of housing is not guaranteed for all applicants.

Application deadlines, costs and a list of amenities are available at digipen.edu/campus-life/housing

International Student Affairs & Study Abroad

The International Student Affairs and Study Abroad (ISASA) office oversees International Student Services, Overseas Immersion Programs, and Study Abroad. They serve as the primary support system for international students at the Redmond campus. They provide comprehensive support for F1 international students, handling immigration compliance (SEVIS), issuing I-20 forms, and advising on visa regulations. They guide students on employment eligibility, required health insurance, and facilitate orientation to help international students adapt to life in the US.

The officials in the office serve as the Designated School Officials (DSOs) who are authorized to process, recommend, and sign immigration documents.

Their core responsibilities include: immigration and visa support, employment advising, orientation and integration, travel assistance, well-being advocacy, and Study Abroad programs. Current students who would like more information on ISASA should contact the office at dso@digipen.edu or studyabroad@digipen.edu

Standards of Progress

Semester Credit Hour

The semester credit hour is the basic unit of credit awarded at the Institute. The academic value of each course is stated in semester credits. DigiPen defines a semester credit hour as follows:

Over any semester, one semester credit hour of academic credit equals:

- at least 15 hours of classroom contact, or
- at least 40 hours per credit of independent study, or
- at least 22.5 hours of supervised laboratory time, or
- at least 45 hours of internship experience

In addition, each semester credit also assumes:

- a minimum of 30 hours over the semester for external preparation, project work, or homework by the student, except for independent studies or internship experience.

A classroom contact hour is 53 minutes in length.

Whenever “semester hour” is used in this Catalog, it is synonymous with “semester credit hour” (SCH) and does not always represent “hours per week in class.” Students taking courses over the summer should be aware that the total number of hours for a course is compressed into fewer weeks, but is not reduced. The number of courses that a student is recommended to take during the shorter summer semester is therefore fewer than the fall or spring semesters.

Credit Expiration

DigiPen will only accept credits from other accredited institutions, if the credits were earned within the last 10 years. DigiPen will not accept any credits earned outside of DigiPen, if they are more than 10 years old. Students may appeal this policy if they believe their credits to still be viable and relevant. Appeals may be made through the Office of the Registrar at registrar.us@digipen.edu.

Grade Level Progression

Credit Amount	Class Standing
less than 30 earned credits*	Freshman class standing
30 earned credits or greater	Sophomore class standing
60 earned credits or greater	Junior class standing
90 earned credits or greater	Senior class standing

**An earned credit is defined as a credit that is awarded a passing final grade and counts towards the program in which the student is currently enrolled.*

Grading System

The following system applies to both undergraduate and graduate students;

The following grading system is in use and, except where otherwise specified, applies to both examinations and homework assignments. The weight of a final examination grade is a matter individually determined by each instructor. See the following Grade Point Average section for additional information.

Grade	Description	Quality Points	Explanation of Minimum Grade Requirement
A	Excellent	4.0	
A-	Excellent	3.7	
B+	Good	3.3	
B	Good	3.0	
B-	Good	2.7	
C+	Fair	2.3	
[1][2]C	Fair	2.0	Minimum grade required for transfer. Minimum grade required to earn credit for graduate students.
[3]C-	Fair	1.7	Minimum grade required to earn credit for undergraduate students.
D	Failure	1	
F	Failure	0	

[1]A grade “C” (for 2.0 quality points) or better is required for transfer credit.

[2]A grade “C” (for 2.0 quality points) or better is required to earn credit for graduate-level classes.

[3]A grade “C-” (for 1.7. quality points) or better is required to earn credit for undergraduate-level classes.

Withdrawal Information and Status

The following applies to both undergraduate and graduate students:

Status	Description	Notes
AU	Audit	The student attended the course without expectation of receiving credit or a grade.
E	Expulsion	A permanent separation from the Institute, with no possibility of return. Initiated by the Institute as a punitive action.

Status	Description	Notes
I	Incomplete	Students who have completed most of the required work for a course and submitted passing work, but circumstances beyond their control prohibit them from taking the final exam or completing coursework by the final due date. The “I” grade is included in the PACE calculation.
IP	In Progress	The grade was not available from the instructor at the time the transcript was printed.
NP	No Pass	For courses where a letter grade is not required. “NP” means that the student has not successfully completed the requirements of the course, but there is no impact on the GPA.
P	Pass	For courses where a letter grade is not required. Some examples of this are internship, seminar, and thesis courses.
S	Suspension	A temporary separation, for a specific period of time (usually one calendar year), from the Institute with the option of a possible future return. Initiated by the Institute as a punitive action. • In order for student to return at the end of the suspension, the student must reapply. This does not result in an automatic reinstatement.
W	Withdrawal	Removal of a student from a course or the Institute, which may or may not allow for future readmission. • Withdrawal from a course or courses equates to the grade of “W”. ◦ Does not affect cumulative GPA, however, it affects PACE. • Withdrawal from the Institute equates to the status of “W”.
WF	Withdrawal Failure	Removal of a student from a course or the Institute, which may or may not allow for future readmission. • Withdrawal from the Institute or a course (after deadline for “W”), equates to the status/ grades of “WF” and affects the cumulative GPA and PACE just as an “F” grade would
WI	Withdrawal Investigation	A withdrawal initiated by the student in an attempt to avoid investigation for a possible offense. • This status documents that the student is under investigation but has chosen to withdraw of their own volition, in an attempt to avoid possible consequences. • Once investigation is complete, this status and pertinent grades will be changed according to the outcome. ◦ Does not affect cumulative GPA, however, it affects PACE.
HW	Hardship Withdrawal	Removal of a student from a course or the Institute, due to a situation beyond their control, involving a documented significant illness or life altering event that prohibits the student from carrying on with their studies. • Student will receive a W grade, which does not affect cumulative GPA, however, it affects PACE.

Withdrawal Policy Deadlines

(Grades assigned for withdrawal from courses during semester)

Withdrawal from Courses During the Semester	Grade Assigned on Transcript
Within 2 weeks (Add/Drop)	No grades recorded
From 15th day to 8th week	“W” grade
After 8th week	“WF” grade

Hardship Withdrawal, and Military Orders Withdrawal will receive a “HW”.

Assessment Process

DigiPen has an assessment process to evaluate the defined student learning outcomes of the education and training and established competencies. This process includes a combination of methods such as grading, portfolio assessment, projects, internships, and criterion-referenced testing based on developed and appropriate rubrics.

Each course syllabus contains clearly defined course objectives and learning outcomes, course requirements, grading policy and allotment, and grading distribution. Students are made aware of the grading policy, performance standards, and grading distribution at the beginning of each course. The faculty measures the student’s achievement of the stated course objectives and learning outcomes based on the grading policy published in the course syllabus.

Grade Point Average

The academic standing of each student is determined on the basis of the grade point average (GPA) earned each semester. The GPA is determined by using the quality points assigned to each course grade a student earns. The quality point value for each grade earned during a semester is multiplied by the number of credit hours assigned to that course as listed elsewhere in this catalog. The sum of these points is the total number of quality points earned during the semester. This sum is divided by the number of credit hours attempted (hours from courses with grades of “A” [or 4.0 quality points] through “F” [or 0 quality points]) to obtain the GPA.

The cumulative GPA consists of all courses completed at DigiPen. If multiple attempts were made for the same course, only the grade earned in the most recently-completed attempt is calculated in the cumulative GPA. Course grades of “AU,” “I,” “W,” “P,” and “NP” are non-punitive grades, so they are not calculated in the overall GPA since they carry no quality points.

The following example demonstrates how GPA is calculated:

Course	Credits	Grade	Points
CS 100	4	A	16.0 (4 x 4.0)
MAT 140	4	A-	14.8 (4 x 3.7)
CS 105	3	B	9.0 (3 x 3.0)
ENG 110	3	D	3.0 (3 x 1.0)
CS 120	4	B+	13.2 (4 x 3.3)
Totals	**18**		**56**

Total grade points divided by total credits equals the cumulative grade point average. Therefore, the grade point average for the above example is 56 divided by 18 for a **3.11 GPA**.

Incomplete Grade Policy

Students who do not believe that they will be able to complete all of their coursework by the end of the semester, may request an Incomplete. The Incomplete will allow them some extra time to finish their work before the instructor processes and publishes their final grade. There are strict rules governing the application for and the completion of Incompletes.

- Incomplete Requests must be submitted prior to the schedule date of the class final or class final project/ assignment, as it appears in the syllabus.
- IF approved, the student must complete the work and submit it to the instructor by no later than the first Thursday (5:00pm) of the following semester.
- Instructors must have assigned and submitted the final grade for the student by no later than the first Friday (5:00pm) of the following semester.
- Students approved for an Incomplete, will be assigned a temporary grade of “I” for the class.
- The “I” grade will be equated to an “F” grade for all Financial Aid processing, until the grade is changed to the official final grade.
- The “I” grade will be equated to an “I” grade for all other processes, until the grade is changed to the official final grade.
- In the case of a student who has Unofficially Withdrawn (stopped attending with no academic activity), but does have one or more “I” grades, we first confirm No Activity/ Attendance (LDA).
    - Once confirmed, the student is considered as unofficially withdrawn in all classes, including those with “I” grades.
    - The Office of the Registrar will change the “I” grade to a “WF” or "F" (depending on the last date of documented academic activity) and withdraw the student.

Satisfactory Academic Progress (SAP)

While enrolled at DigiPen Institute of Technology, students are required to maintain satisfactory academic progress (SAP) to remain in good standing in their program. SAP is based on the cumulative Grade Point Average (GPA) of all courses taken at DigiPen to meet the qualitative standard, completion rate of credits (PACE) to meet the quantitative standard, completion of the program within the maximum timeframe (150%), and successful completion of all courses within three attempts. If you believe you are in danger of not meeting SAP standards, please schedule an appointment with your Student Success Advisor.

For All Academic Warning Students

Students will be notified within one week of final grade submission if they have been placed on Academic Warning for any reason via their DigiPen email. During their first semester on Academic Warning, students will be restricted to enrolling in a maximum of 15 credit hours, and their final schedule must be approved by a Student Success Advisor (SSA). Students who exceed the 15-credit limit may have their schedules administratively adjusted to comply with this requirement. Students must meet with a SSA to review their Academic Warning semester requirements and to complete their Academic Warning Success Plan. A deadline to meet with an SSA will be included in their Academic Warning email notification. Failure to meet with an SSA by the specified deadline may result in a hold being placed on their Colleague Self-Service account, preventing any course add, drops, or withdrawals until the student has met with an SSA. Students who fail to meet with an SSA to complete their Academic Warning Success Plan are still responsible for meeting the semester requirements outlined below and are subject to withdrawal and suspension. Students on Academic Warning for multiple reasons will have to meet all their requirements each semester to avoid being institutionally withdrawn and suspended.

Full-Time Status

Full-time enrollment for undergraduate students is 12 or more credits per semester.

Full-time enrollment for graduate students is 9 or more credits per semester.

Full-Time to Part-Time Program Transfer for MFADA

When a matriculated/active full-time graduate student in the Master of Fine Arts in Digital Arts (MFADA) program is employed full time, or when they cannot maintain the full-time student status for two consecutive semesters (summer semesters are not included), the student should transfer from the full-time program to the part-time program. All graduate-level credits earned in the full-time MFADA program can be transferred to the part-time program. The student must fill out a Program Transfer Request form and obtain approval

from the Student Success Advisor in order to transfer from the full-time to the part-time program. Once granted, the student will be transferred to the part-time program for the next semester.

Financial Aid Requirements

The Office of Financial Aid is required by federal and state regulations to determine if students receiving financial aid are making Satisfactory Academic Progress (SAP). To maintain eligibility for all forms of aid a student must meet specific standards for Satisfactory Academic Progress. This is to ensure that all students are making progress towards degree completion.

Federal State and Institutional Aid SAP Policy

All students receiving federal financial aid must meet the Qualitative Standard, Quantitative Standard and the Maximum Time Frame Standard to maintain eligibility for financial aid funds.

Federal, State and Institutional Aid SAP Standards

Undergraduate Students

Qualitative Standard (GPA) - Undergraduate students must maintain at least a 2.0 cumulative GPA. Undergraduate students are expected to have a 2.0 GPA by the end of their second year at DigiPen. Students who do not achieve this GPA will immediately be placed on Financial Aid termination.

Quantitative Standard (PACE) - Undergraduate students must successfully complete two-thirds (67%) of total credits hours attempted (known as PACE: Percent of Attempted Credits Earned).

- Example, a student who has attempted 45 credit hours must have successfully completed at least 30 credit hours: 30/45 = 0.667 or 67%. All attempted credits count toward PACE.

Maximum Time Frame - Undergraduate students may attempt no more than 150% of the maximum credits required to complete an academic program.

Graduate Students

Qualitative Standard (GPA) - Graduate students must maintain at least a 3.0 cumulative GPA.

Quantitative Standard (PACE) - Graduate students must complete at least 67% of attempted credits or cumulative attempted credits.

Maximum Time Frame - Graduate students may attempt no more than 150% of the credits required to complete their program.

Academic Warning and Administrative Withdrawal

Undergraduate and Graduate Students who fail to maintain the requirements listed above will be placed on Academic Warning in the following semester and must meet with their SSA to agree on a plan for getting back to Good Standing. Failure to satisfy these requirements will result in administrative withdrawal, and withdrawn students must wait one semester before they can apply for readmission.

Eligibility Review Policy

SAP eligibility is reviewed after the completion of each term. All periods of attendance count toward the fulfillment of each requirement (e.g., terms that a student must fund due to failure to make SAP and students who have previously attended the school without Title IV aid and who now apply for aid). Students not making SAP will be notified by the Office of Financial Aid via email at the end of each term. Students can also see their current Financial Aid SAP Status in the Financial Aid section of Colleague Self-Service student portal.

Course Repeat

Students may attempt a course a total of four times in an effort to earn a passing grade.

- Once a course is passed, students are only able to use federal financial aid to pay for a retake of that class one time. Any additional retakes of the passed class cannot be covered with federal financial aid. If a course is failed, students may continue to receive federal funding for each repeat of the class until a passing grade is earned as long as the student is meeting Satisfactory Academic Progress.
- A student who attempts a course without passing three times will be placed on Academic Warning and will be allowed to make a final fourth attempt while on Academic Warning.
- If the student passes on the fourth attempt, they will be removed from Academic Warning (as it pertains to the Course Repeat Policy) and will continue with their program.
- If the student fails the fourth attempt, they will be administratively withdrawn from the institute. **There will be no appeal or readmit in this case.**
- The student may apply for readmit into a different program that does not have the failed course as a requirement.
- Students may not repeat a course that they have previously passed, unless that course is listed in the catalog as a “repeatable for credit” course.
- All course attempts (including withdrawals) are included in the total attempts calculations for this policy.

SAP Statuses

After each semester, the Office of Financial Aid and the SSAs will evaluate each student’s GPA, PACE, and Maximum Time Frame and determine if SAP standards are met. Based on this evaluation the student’s SAP status for the next term is determined. Below is a list of each SAP status and the corresponding definitions.

Good Standing

Students are considered in “good standing” if at the end of the semester they meet all the SAP standards defined above. Students in good standing are not notified at the end of each semester.

Financial Aid Warning

Students who do not meet all of the SAP standards at the end of a semester and who were not already on warning in that semester will be placed on warning for the following semester and notified via email. This is an opportunity for the student to improve their academic performance to meet SAP standards. No appeal is necessary, and students can receive federal financial aid during the warning term. Students on warning are notified of their SAP status via email.

Financial Aid Termination

Students who do not meet the SAP standards at the end of a semester in which they were on warning will have their eligibility for federal student aid terminated. They will not be eligible for federal student aid until they can meet SAP standards or appeal their termination. See the following section for more details on the appeal process.

Financial Aid Probation

If a student successfully appeals their financial aid termination, they are placed on probation for one or more semesters as determined by the Office of Financial Aid. Students granted an appeal for a single semester must meet SAP standards by the end of that semester. Students granted probation for multiple semesters must meet the terms of their SAP Academic Plan. If students do not meet these requirements, their eligibility for aid will be terminated until another appeal is granted or they are meeting SAP standards. See the following section for more details on the appeal process.

Regaining Eligibility After Termination

Students can appeal to the Office of Financial Aid to be placed on Financial Aid Probation and receive aid after their eligibility for aid was terminated.

Appeal & Academic Plans

Appeals must be submitted in writing to the Office of Financial Aid outlining any extenuating circumstance(s) that influenced the student’s academic performance. Extenuating circumstances are those events that are beyond the student’s control (i.e. serious injury, illness or mental health condition, death of an immediate family member, etc.).

The appeal should be typed and include:

- A description of the extenuating circumstance(s)
- Documentation of circumstance(s);
- Copy of Completed Academic Plan signed by a Student Success Advisor (SSA). The purpose of an academic plan is to bring the student’s academic performance back within the required SAP standards by the end of one or more semesters. The plan is devised and approved by the Student Success Advisor (SSA), including a detailed description of how the student plans to address the issue going forward, a signature, and contact information.

The Financial Aid Appeals Committee will review the appeal within 5-10 business days of its receipt; the time frame for rendering a decision may vary depending on when in the semester it is submitted. Students will be notified by email if there will be a significant delay in review. Each appeal will be considered on a case-by-case basis. Students filing an appeal will be advised in writing of the decision via their student e-mail account. The committee’s decision is final and cannot be appealed to a higher level. If the appeal is approved the student will be placed on probation and receive financial aid for the semester for which the appeal is submitted, their academic performance will be reviewed at the end of that semester to determine if they are meeting SAP standards or the terms of the SAP Academic Plan and are eligible to receive financial aid in the following semester. Students not meeting SAP standards or the terms of their SAP Academic Plan as applicable will have their eligibility for aid terminated until they are meeting SAP standards, or a new appeal is granted.

New Appeals

If the student fails to meet the conditions of their appeal, they will have their eligibility for financial aid terminated. Students may submit a new appeal if their failure to meet the conditions of their previous appeal was due to a new extenuating circumstance. New appeals due to the same circumstance(s) as a prior appeal will not be granted. If the previous appeal required a SAP Academic Plan, a new SAP Academic Plan must be developed by the student and their SSA.

Re-Establishing Eligibility Without an Appeal

If a student does not appeal termination, or their appeal is denied, they will regain eligibility for Federal Student Aid in the first semester after they successfully meet DigiPen’s SAP standards, assuming they still meet all other eligibility criteria to receive aid.

DigiPen Scholarship SAP Standards

To maintain eligibility for any DigiPen scholarship, students must meet federal SAP requirements.

Special Considerations

Transfer Credits

Transfer credits accepted by DigiPen are included in the maximum timeframe and the PACE of completion policy. Transfer hours

accepted towards completion of a student's program count as both credits attempted and credits earned. Transfer credits are not included in the cumulative and major GPA.

Major or Degree Changes

A student may change from one degree to another during attendance at DigiPen. Students who change from one major to another are still expected to maintain Satisfactory Academic Progress and complete the course work within the maximum time frame. All attempted credits from a prior major are included in the total attempted credits. See the Degree Plan Policy for more information.

Incomplete Grades

An incomplete grade indicates that a student has not finished all coursework required for a grade. An incomplete will count toward attempted credit but not as credits earned until a final grade is posted from the Office of the Registrar. Incomplete grades, however, do not impact GPA calculations.

Withdrawing from Courses & 'W' Grades

A 'W' or 'WF' grade is considered an attempted and unearned grade and impacts Maximum Timeframe and PACE when determining if a student is making SAP. The 'W' grade has no impact on GPA. However, 'WF' does affect cumulative GPA just like an 'F' grade would.

Returning from Official Withdrawal (Readmits)

Students returning to DigiPen after an official withdrawal who were considered "SAP ineligible" for the term in which they withdrew will need to submit an appeal to the Office of Financial Aid in order to be considered for federal aid.

Second Bachelor's

If a student is completing a second bachelor's degree at DigiPen, only the courses pertaining to that degree will be considered when manually calculating the Maximum Timeframe and PACE of Completion SAP calculation. Transfer credits including DigiPen credits from a previous bachelor's degree will not be included in the cumulative and major GPA. The student should communicate to the Office of Financial Aid of their enrollment in a second bachelor's degree program.

(Cumulative credits earned / Cumulative credits attempted) x 100 = PACE (%)

See the following chart for a sample PACE calculation.

Course	Credits	Final Grade	Grade Points
PSY 101	3	A-	11.10 (3 x 3.7)
COL 101	1	P	0.00
CS 116	4	W	0.00
DES 100	4	F	0.00
DES 101	4	B	12 (4 x 3.0)
	16		**23.10**
Cumulative semester attempted credits (for GPA)			11.00
Cumulative semester attempted credits (for PACE)			16.00
Cumulative Credits Earned			8.00
Grade Points			23.10
GPA			**2.10**

Earned credits include: A-, B, and P

Attempted Credits for PACE included: A-, F, W, P, and B
(8.00 / 16.00) x 100 = **50%**

The calculation of PACE is based on the total cumulative credits earned divided by cumulative credits attempted. Therefore, the PACE calculation for the above example is 11 earned credits divided by 16 attempted credits, resulting in 50% PACE.

Students not maintaining satisfactory PACE for their program will be placed on Academic Warning. Such students will work with their Student Success Advisor to establish an academic plan to help them get back on PACE to graduate within 150% of the published length of the educational program, as measured in semester credit hours. Failure to meet the terms of this academic plan by not meeting semester PACE requirements, may result in Administrative Withdrawal and the student would not be eligible to apply for readmission for one semester. For financial aid recipients, please also refer to the *SAP Policy for Financial Aid* section in the Financial Assistance chapter for more information.

Please contact the Student Success Advisors or the Office of the Registrar with any questions regarding how PACE is calculated or to determine if you are making satisfactory PACE for the program in which you enrolled.

Graduation

Graduation Requirements

Degrees will be granted at the end of the semester in which students complete:

1. All program course requirements and minimum number of credits required for their program within 1.5 times the attempted credits.
    a. This is 150% of the published credits required to complete a student's major program of study. Once a student hits this metric, they will be in danger of being placed on "Financial Aid Termination" status for Financial Aid. Although this may be appealed, the appeal may be denied. Students who are in danger of reaching this metric should contact their SSA and Financial Aid Officer.
2. GPA requirements for graduation.
    a. All undergraduate students must have a cumulative GPA of at least 2.0 to graduate.
    b. All graduate students must have a cumulative GPA of 3.0 to graduate.
3. Fulfillment of financial obligations to the school.

Applying for Graduation

The Institute sets minimum graduation requirements for all students seeking degrees. DigiPen reserves the right to change graduation requirements at any time. Every degree candidate is expected to comply with changes in requirements as they relate to the uncompleted portion of coursework.

Most students will follow the graduation requirements published in the Catalog for the year they enter DigiPen. Students may find their Catalog Year in Colleague Self-Service (CSS). Graduating students must be actively enrolled during their final semester at DigiPen. Students who interrupt their attendance may be held to the requirements of the current Catalog when they return. Students are responsible for ensuring that all graduation requirements have been completed.

Students who feel there is justification for an exception to these graduation requirements may petition the Appeals and Disciplinary Committee. Information on filing a petition is available at the Office of the Registrar.

Graduation Application Process

Graduation Term	Graduation Application Due Date
Spring	December 1
Summer	February 1
Fall	August 1

1. The student completes the Graduation Application via Colleague Self Service (CSS) by the deadlines stated in the table above.
2. The Administrator will review the most recent transcript or degree plan to verify progress and will notify the student whether or not the student has completed all courses satisfactorily to date, and, if upon satisfactory completion of courses for which the student is currently registered, the student will be eligible for graduation.
3. Final approval will not be made until after final grades are submitted and posted to the student's record. The student needs to keep the Office of the Registrar informed of address changes so that degrees will be mailed to the correct address.

Graduating with Academic Honors

DigiPen Institute of Technology recognizes and commends students whose cumulative GPA indicates distinguished academic accomplishment upon the completion of the program.

Graduate students who graduate with a cumulative GPA of 3.7 or above are recognized as Graduating with Distinction.

Undergraduate students who graduate with a cumulative GPA of 3.85-4.0 are recognized as graduating Summa Cum Laude.

Undergraduate students who graduate with a cumulative GPA of 3.7-3.84 are recognized as graduating Magna Cum Laude.

Undergraduate students who graduate with a cumulative GPA of 3.5-3.69 are recognized as graduating Cum Laude.

Diploma Distribution

Diplomas are available 8-10 weeks after the end of the semester in which they are earned.

Policies and Procedures

Regulation of Conduct and Disciplinary Procedures

DigiPen Institute of Technology is an academic institution that strives to ensure all students have a safe and effective learning environment free of harassment, which supports collaborative and cooperative education. To this end, students will comport themselves in a professional manner when dealing with instructors, faculty, administrators, and/or other students. They are expected to dress and manage personal hygiene in a way that does not cause undue offense to other students, faculty, or staff of the Institute, and to refrain from verbal or physical intimidation of others. The Institute has the right to take appropriate disciplinary action warranted by a student's misconduct. The specific provisions as to offenses, penalties, and disciplinary procedures set out below should not be construed as limiting the general authority of the Institute.

The following information are available in DigiPen's Student Handbook.

- Code of Student Conduct
- Academic Dishonesty
- Disciplinary Process
- Warnings
- Penalties
- Appealing a Charge of Academic Dishonesty or Policy Violation
- Appealing a Decision Made by a Designated School Official
- Dismissal by the Institute
- Title IX

Family Educational Rights and Privacy Act (FERPA)

Students' Rights to Their Academic Records

The Family Educational Rights and Privacy Act (FERPA) affords eligible students certain rights with respect to their education records. An "eligible student" under FERPA is a student who is 18 years of age or older or who attends a postsecondary institution at any age. At DigiPen, New Students become FERPA eligible (restrictions and protections apply) on the first day of classes of their first semester. From this point forward, throughout their tenure with DigiPen and until deceased, FERPA restrictions and protection of all student academic records will apply. These rights include:

1. The right to inspect and review the student's education records within 45 days after the day the Institute receives a request for access. A student should submit to the Office of the Registrar, Dean, or head of the academic department a written request that identifies the record(s) the student wishes to inspect. The Institute official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Institute official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of the student's education records that the student believes is inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA.
    - A student who wishes to ask the school to amend a record should write the school official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed.
    - If the Institute decides not to amend the record as requested, the Institute will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to provide written consent before the Institute discloses personally identifiable information (PII) from the student's education records, except to the extent that FERPA authorizes disclosure without consent.
    - The Institute discloses education records without a student's prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official typically includes a person employed by the Institute in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee. A school official also may include a volunteer or contractor outside of the Institute who performs an institutional service or function for which the school would otherwise use its own employees and who is under the direct control of the school with respect to the use and maintenance of PII from education records, such as an attorney, auditor, or collection agent or a student volunteering to assist another school official in performing his or her tasks. A school official typically has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the Institute.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the Institute to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

- Family Policy Compliance Office
  U.S. Department of Education
  400 Maryland Avenue, SW
  Washington, DC 20202

According to SEVP regulations, SEVP-certified schools are subject to review at any time. In addition, provisions outlined in FERPA do not apply to F and M international students.

See the List Below of the Disclosures that Postsecondary Institutions May Make Without Consent

FERPA permits the disclosure of PII from students' education records, without consent of the student, if the disclosure meets certain conditions found in § 99.31 of the FERPA regulations. Except for disclosures to school officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information, and disclosures to the student, § 99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose PII from the education records without obtaining prior written consent of the student —

- To other school officials, including teachers, within DigiPen whom the school has determined to have legitimate educational interests. This includes contractors, consultants, volunteers, or other parties to whom the school has outsourced institutional services or functions, provided that the conditions listed in § 99.31(a)(1)(i)(B)(1) - (a)(1)(i)(B)(3) are met. (§ 99.31(a)(1))
- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student's enrollment or transfer, subject to the requirements of § 99.34. (§ 99.31(a)(2))
- To authorized representatives of the U. S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or State and local educational authorities, such as a State postsecondary authority that is responsible for supervising the university's State-supported education programs. Disclosures under this provision may be made, subject to the requirements of §99.35, in connection with an audit or evaluation of Federal- or State-supported education programs, or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of PII to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation, or enforcement or compliance activity on their behalf. (§§ 99.31(a)(3) and 99.35)
- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid, or enforce the terms and conditions of the aid. (§ 99.31(a)(4))
- To organizations conducting studies for, or on behalf of, the school, in order to: (a) develop, validate, or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§ 99.31(a)(6))
- To accrediting organizations to carry out their accrediting functions. (§ 99.31(a)(7))
- To parents of an eligible student if the student is a dependent for IRS tax purposes. (§ 99.31(a)(8))
- To comply with a judicial order or lawfully issued subpoena. (§ 99.31(a)(9))
- To appropriate officials in connection with a health or safety emergency, subject to § 99.36. (§ 99.31(a)(10))
- Information the school has designated as "directory information" under § 99.37. (§ 99.31(a)(11))
- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of § 99.39. The disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding. (§ 99.31(a)(13))
- To the general public, the final results of a disciplinary proceeding, subject to the requirements of § 99.39, if the school determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the school's rules or policies with respect to the allegation made against him or her. (§ 99.31(a)(14))
- To parents of a student regarding the student's violation of any Federal, State, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21. (§99.31(a)(15))

Proxy and FERPA Forms

Please be aware that while students can create Proxies and submit FERPA Forms as soon as they gain access to CSS, they are not considered FERPA eligible until the first day of classes. Consequently, the FERPA restrictions on sharing student information do not take effect until that date. DigiPen staff will only share student information when absolutely necessary to fulfill their official duties.

Proxy

In Colleague Self Service, students may grant 'proxy' to an individual to access certain aspects of their student account. By adding a proxy, students waive all or some of their privacy rights under FERPA to the designated individual. Proxy access is set by the student and can allow universal access or restrict proxy access to certain information (such as billing information, financial aid information, or grades). The designated individual will be able to view, print and download information to which the student has granted them access. Proxy access also grants the designated individual the right to communicate with Financial Aid, Bursar, Student Success Advising, Faculty, and Registrar about ONLY the information to which the student has permitted proxy access. A separate, paper FERPA waiver is not

required to release information to a proxy as long as the only information released aligns with the access the student has granted their proxy.

FERPA Release Form for Employment Reference

A Proxy in Colleague Self Service is not broad enough to cover any and all FERPA required permissions. To allow a faculty or staff member permission to support a student as a reference for a job or other university application (written or oral), a separate Student Reference Request/FERPA Release form must be completed and submitted. The Proxy module in CSS has a link to the form required for this.

Full FERPA Block

A Proxy in Colleague Self Service is not broad enough to cover a complete block of all Directory Information. Without a Full FERPA Block, the school may share basic directory information.

This includes

1. Name
2. Primary telephone number
3. Institute email address *(This is a DIT policy, whereas FERPA does not limit to institute emails only.)*
4. Major field of studies
5. Dates of attendance
6. Degrees and awards received
7. Full-time or part-time enrollment status
8. Number of credits for which a student is registered each semester.
9. Educational institutions attended

While we will not share this information without good reason, you should be aware that it is allowed under the FERPA regulations. If you would like to create a Full FERPA Block, you may click on the link, found within the CSS Proxy module. However, you should know that this will remove your name from ALL publications, events, announcements, etc.

Degrees

Art, Minor

(Not available to BFA DAA students)

Degree / Minor Requirements
To earn an Art Minor at DigiPen, students must complete a block of credits satisfying the following:

Course Code	Title	Credits
	15 Credits of Animation, Art, Computer Graphics, or Film Courses	15
	Total Credits	**15**

Computer Science, Minor

Degree / Minor Requirements
To earn a Computer Science minor at DigiPen, a student must complete a block of 17 credits satisfying the following:

Course Code	Title	Credits
	6+ Credits of Computer Science Courses Numbered 200 or Higher	6
	Total Credits	**17**

Computer Science, Bachelor of Science

Program Overview
The Bachelor of Science in Computer Science (BSCS) degree program at DigiPen aims to produce graduates who are exceptionally competent software engineers and practitioners. Their work is notable for its technical excellence and innovation for effective application to real-world problem solving. Their body of work impacts fields related to massive data management, cloud computing, distributed computing, software development, real-time simulations, and game development. Our graduates possess sound professional skills that include design, implementation, testing, deployment, and maintenance of real-world software solutions in a team-based environment. They are prepared and motivated for a lifetime of independent, reflective learning and critical thinking, and engage proactively with issues related to societal impacts of their work on both a local and global scale.

Student Learning Outcomes & Educational Objectives
Towards achieving the above objectives, upon completion of the BSCS program, students are expected to achieve the following outcomes:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Career Outlook
Graduates of this degree program will be prepared to enter technical industries as entry-level software engineers. Possible entry-level positions include Software Engineer, Software Developer, Software Development Engineer, Software Development Engineer in Test, Quality Assurance Engineer, Software Analyst, Application Analyst, Computer Programmer, Artificial Intelligence Programmer, Networking Programmer, Server Programmer, Web Programmer, User Interface Programmer, Tools Programmer, or Game Developer. This degree program also includes secondary training that can contribute directly to a graduate obtaining positions such as Producer, Program Manager, Technical Program Manager, and Technical Writer. With sufficient experience in the industry, graduates may obtain positions such as Lead Engineer, Lead Program Manager, Development Manager, Software Architect, or Technical Director.

Graduate Degree
Students in the BS in Computer Science program who are interested in pursuing a graduate degree at DigiPen or taking graduate level coursework during their undergraduate studies may participate in the "BS/MS in Computer Science Accelerated Schedule" option, which permits students to obtain the Bachelor of Science and Master of Science (both in Computer Science) degrees within five years. Students who meet the minimum requirements to take selected graduate-level courses during the junior and senior years of their undergraduate study can apply up to 12 credits towards both BS and MS degree requirements. Students who pursue the accelerated schedule can successfully complete their BS in Computer Science

degree and Master of Science in Computer Science in five years sequentially. Please refer to the BS/MS in Computer Science Accelerated Schedule section for more details.

Degree / Minor Requirements

Number of Credits and GPA

The BS in Computer Science requires completion of at least 134 semester credits with a cumulative GPA of 2.0 or better. The program spans eight semesters of 15 weeks each, or four academic years.

Arts and Media

Students are required to take:

Course Code	Title	Credits
	3 Credits of Art, Digital Art, Film, Game Design, or Music Courses	3
	Sub-Total Credits	**3**

Computer Science

The following courses are required:

Course Code	Title	Credits
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 225	Advanced C/C++	3
CS 230	Introduction to Game Engine Architecture	3
CS 280	Data Structures	3
CS 330	Algorithm Analysis	3
	9 Credits of Computer Science Courses Numbered 200 or Higher	9
	Sub-Total Credits	**36**

Program Focus

The following courses are required:

Course Code	Title	Credits
CS 211	Introduction to Databases	3
CS 212	Advanced Databases	3
CS 260	Computer Networks I: Interprocess Communication	3
CS 261	Computer Networks II	3
CS 314	Distributed Data Management	3
	Sub-Total Credits	**15**

Social Impact of Computing

The following course is required:

Course Code	Title	Credits
CS 205	Professional and Societal Issues in Computing	3
	Sub-Total Credits	**3**

General Studies

The following course is required:

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**1**

Humanities and Social Sciences

The following courses are required:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
	6 Credits of English Courses	6
	3 Credits of Humanities or Social Sciences Courses	3
	Sub-Total Credits	**15**

Mathematics

The following courses are required:

Course Code	Title	Credits
MAT 106	Precalculus	3
MAT 140	Linear Algebra and Geometry	4
	MAT 150 or MAT 180	4
	MAT 200 or MAT 230	4
MAT 250	Linear Algebra	3
MAT 258	Discrete Mathematics	3
MAT 340	Probability and Statistics	3

	Sub-Total Credits	**24**

Natural Science

The following courses are required:

Course Code	Title	Credits
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
PHY 250	Waves, Optics, and Thermodynamics	4
	Sub-Total Credits	**9**

Team Projects

The following courses are required:

Course Code	Title	Credits
GAM 100	Project Introduction	3
GAM 150	Project I	3
	GAM 200 or CSP 200	4
	GAM 250 or CSP 250	4
	8 Credits of Team Project Courses Numbered 300 or Higher	8
	Sub-Total Credits	**22**

Open Electives

Six credits must be selected from any course.

	Sub-Total Credits	**6**

General Education Courses

The following courses satisfy the general education requirement for the Bachelor of Science in Computer Science:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
	6 Credits of English Courses	6
	Humanities and Social Sciences Elective	3
	MAT 150 or MAT 180	4
MAT 250	Linear Algebra	3
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
PHY 250	Waves, Optics, and Thermodynamics	4
	Sub-Total Credits	**31**

	Total Credits	**134**

Course Sequencing

Fall Start

Semester 1: Fall

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
GAM 100	Project Introduction	3
MAT 106	Precalculus	3
	ENG 110 or COM 150	3
	Sub-Total Credits	**18**

Semester 2: Spring

Course Code	Title	Credits
GAM 150	Project I	3
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
MAT 140	Linear Algebra and Geometry	4
	ENG 110 or COM 150	3
	Sub-Total Credits	**17**

Semester 3: Fall

Course Code	Title	Credits
GAM 200	Project II	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 211	Introduction to Databases	3
CS 225	Advanced C/C++	3
	MAT 150 or MAT 180	4

	Sub-Total Credits	**17**

GAM 200: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 4: Spring

Course Code	Title	Credits
GAM 250	Project II	4
CS 212	Advanced Databases	3
	MAT 200 or MAT 230	4
CS 280	Data Structures	3
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
	Sub-Total Credits	**19**

GAM 250: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 5: Fall

Course Code	Title	Credits
GAM 300	Project III	4
CS 260	Computer Networks I: Interprocess Communication	3
CS 330	Algorithm Analysis	3
MAT 258	Discrete Mathematics	3
PHY 250	Waves, Optics, and Thermodynamics	4
	Sub-Total Credits	**17**

GAM 300: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 6: Spring

Course Code	Title	Credits
GAM 350	Project III	4
CS 205	Professional and Societal Issues in Computing	3
CS 261	Computer Networks II	3
MAT 340	Probability and Statistics	3
	English Course	3
	Sub-Total Credits	**16**

GAM 350: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 7: Fall

Course Code	Title	Credits
	GAM 375, GAM 400, or Other Course	3-4
CS 314	Distributed Data Management	3
	Computer Science Elective Numbered 200 or Higher	3
MAT 250	Linear Algebra	3
	3 Credits of Art, Digital Art, Film, Game Design, or Music Courses	3
	Sub-Total Credits	**15-16**

GAM 375, GAM 400: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 8: Spring

Course Code	Title	Credits
	GAM 400, GAM 450, or Other Course	4
	Computer Science Elective Numbered 200 or Higher	3
	Computer Science Elective Numbered 200 or Higher	3
	Humanities and Social Sciences Elective	3
	English Course	3
	Sub-Total Credits	**16**

GAM 400, GAM 450: Other courses may fulfill this requirement. See degree program requirements for details.

Spring Start

Semester 1: Spring

Course Code	Title	Credits
GAM 100	Project Introduction	3
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
MAT 106	Precalculus	3
	ENG 110 or COM 150	3
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**18**

Semester 2: Summer

Course Code	Title	Credits
GAM 150	Project I	3
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
MAT 140	Linear Algebra and Geometry	4
	Sub-Total Credits	**14**

Semester 3: Fall

Course Code	Title	Credits
GAM 200	Project II	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 211	Introduction to Databases	3
CS 225	Advanced C/C++	3
	MAT 150 or MAT 180	4
	ENG 110 or COM 150	3
	Sub-Total Credits	**20**

Semester 4: Spring

Course Code	Title	Credits
GAM 250	Project II	4
CS 212	Advanced Databases	3
CS 280	Data Structures	3
	MAT 200 or MAT 230	4
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
	Sub-Total Credits	**19**

Semester 5: Fall

Course Code	Title	Credits
GAM 300	Project III	4
CS 260	Computer Networks I: Interprocess Communication	3
CS 330	Algorithm Analysis	3
MAT 258	Discrete Mathematics	3
PHY 250	Waves, Optics, and Thermodynamics	4
	Sub-Total Credits	**17**

GAM 300: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 6: Spring

Course Code	Title	Credits
GAM 350	Project III	4
CS 205	Professional and Societal Issues in Computing	3
CS 261	Computer Networks II	3
MAT 340	Probability and Statistics	3
	English Course	3
	Sub-Total Credits	**16**

GAM 350: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 7: Fall

Course Code	Title	Credits
	GAM 375, GAM 400, or Other Course	3-4
CS 314	Distributed Data Management	3
MAT 250	Linear Algebra	3
	Computer Science Elective Numbered 200 or Higher	3
	3 Credits of Art, Digital Art, Film, Game Design, or Music Courses	3
	Sub-Total Credits	**15-16**

GAM 375, GAM 400: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 8: Spring

Course Code	Title	Credits
	GAM 400, GAM 450, or Other Course	4
	Computer Science Elective Numbered 200 or Higher	3
	Computer Science Elective Numbered 200 or Higher	3
	English Course	3
	Humanities and Social Sciences Elective	3
	Sub-Total Credits	**16**

GAM 400, GAM 450: Other courses may fulfill this requirement. See degree program requirements for details.

Computer Science, Accelerated BS/MS

DigiPen offers students the opportunity to complete a selected Bachelor of Science in Computer Science degree and Master of Science in Computer Science program in five years through an accelerated schedule. The accelerated schedule permits students who meet the requirements to take selected graduate-level courses during their undergraduate study and apply up to 12 credits towards both BS and MS degree requirements. Students who pursue the accelerated schedule will complete their BS CS Programs while at the same time beginning to extend their knowledge into the graduate-level curriculum. This gives student an opportunity to finish both degree programs in five years sequentially, first their BS CS Programs and then Master of Science in Computer Science in one year.

Program Overview

Students on the accelerated schedule may choose up to 12 graduate-level credits that satisfy MS CS program requirements, at least 6 of which must be Computer Science credits. Those credits will be shared between undergraduate and graduate programs. Students may only share credits of courses for which they earn a grade of "B-" (or 2.7 quality points) or higher.

Eligibility

To be considered for the BS/MS accelerated schedule, students must meet the following requirements:

- Enrolled in one of the BSCS, BSCSAI, BSCSGD, or BSCSRTIS programs
- Cumulative GPA in CS/MAT/PHY courses of 2.5 or higher
- Approval of the MSCS program director

The Master of Science in Computer Science Program Director will review the student's request of entering the accelerated schedule and inform the student. Please note that the petition to be considered for the BS/MS accelerated schedule does not indicate admission to the Master of Science in Computer Science degree program. Students must still apply for the Master of Science in Computer Science degree program following the standard admission procedures.

Degree / Minor Requirements

Students taking the accelerated schedule must satisfy the MS in Computer Science (MSCS) degree program graduation requirements to earn this degree. The MS in Computer Science degree program requires a total of 30 credits; students who complete 12 credits during their undergraduate program will have 18 credits remaining. Those remaining credits may be completed in two semesters (e.g., 9 credits during the first semester and 9 during their second semester).

To graduate from the MSCS program, students on the 4+1 accelerated schedule must meet the requirements of the MSCS program.

	Total Credits	**30**

Course Sequencing

Below is the recommended MS in Computer Science schedule for students completing the accelerated schedule.

Semester 1

Course Code	Title	Credits
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Open Elective, Specialization, Research Methods, or Project Course	3
	Sub-Total Credits	**9**

Semester 2

Course Code	Title	Credits
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Open Elective, Specialization, Research Methods, or Project Course	3
	Sub-Total Credits	**9**

Computer Science, Master of Science

Program Overview

The Master of Science in Computer Science program equips students with the skills to design and develop software through a strong foundation in computer science theory combined with hands-on, team-based project experience. Students gain expertise in collecting, storing, and analyzing real-world data; leveraging the power of

distributed computing systems; and designing intuitive, user-friendly digital interfaces. This comprehensive training not only enables students to master current technologies but also empowers them to tackle complex challenges and collaboratively create the innovations of tomorrow.

Student Learning Outcomes & Educational Objectives

1) Advanced Technical Proficiency: Demonstrate advanced technical skills in computer science, including proficiency in algorithms, data structures, programming languages, and system design, with a focus on applications relevant to interactive media and game development.

2) Complex Problem Solving: Analyze and solve complex problems in computer science and interactive media by integrating advanced theoretical and practical approaches, including optimization, concurrency, and distributed systems.

3) Collaboration and Team Dynamics: Work effectively in multidisciplinary teams, demonstrating strong collaboration skills and the ability to manage and contribute to complex projects, including those involving game design, media production, and interactive technologies.

4) Communication and Presentation Skills: Communicate effectively and professionally in written and oral formats, presenting complex technical information clearly and persuasively to selected audiences, including stakeholders, and team members.

5) Adaptability: Exhibit the ability to adapt to new technologies and emerging trends in computer science and interactive media, committing to ongoing professional development and lifelong learning.

6) Effective Software Engineering: Design, develop, and evaluate high-quality software systems and applications using best practices in software engineering, including version control, testing, and debugging, particularly in the context of game and media software.

Career Outlook

Graduates of this program are well-prepared to enter the technology industry as entry-level to mid-level software engineers. Possible positions include software engineer, software developer, software development engineer, software development engineer in test, quality assurance engineer, software analyst, application analyst, computer programmer, artificial intelligence programmer, networking programmer, server programmer, web programmer, user interface programmer, tools programmer, and game developer.

In addition to technical training, the program provides secondary skill development that supports roles such as producer, program manager, technical program manager, and technical writer.

With sufficient industry experience, graduates may advance into senior positions such as lead engineer, lead program manager, development manager, software architect, or technical director.

Degree / Minor Requirements

Number of Credits & GPA

The MS in Computer Science requires the completion of at least 30 semester credits with a grade “C” (or 2.0 quality points) or above in each course and with a cumulative GPA of 3.0 or higher. The program is typically completed over 12 months (three semesters).

Computer Science

Take CS 525 and 1 of the following options:

Course Code	Title	Credits
CS 525	Advanced C/C++	3
	CS 529 and CS 541	6
	CS 532 and CS 545	6
	Sub-Total Credits	**9**

Specialization

Choose 2 courses from 1 of the specialization pools listed below:

Course Code	Title	Credits
	Artificial Intelligence Specialization Pool	6
	Graphics Specialization Pool	6
	Digital Audio Specialization Pool	6
	Computer Imaging Specialization Pool	6
	Physically-Based Modeling Specialization Pool	6
	Sub-Total Credits	**6**

Elective

One course from the following is required:

Course Code	Title	Credits
	Computer Science Course Numbered 500 or Higher	3
	Physics Course numbered 500 or Higher	3
	Mathematics Course Numbered 500 or Higher	3
	Sub-Total Credits	**3**

Projects

Pick 2:

Course Code	Title	Credits
	2 Courses from GAM 541, GAM 550, GAM 551, GAM 590, or GAM 591	6
	Sub-Total Credits	**6**

Note on Capstone Experience

Students must choose one of the following tracks for their Capstone Experience:

Thesis

Students must identify an area of interest within the discipline of computer science, computer engineering, mathematics, physics, or game production. They shall conduct a literature survey on existing techniques and algorithms in the field, propose an innovative approach to the field, develop the theory and prototypes, and write and defend the thesis.

Applied Project

Students must identify a real-world problem or industry-relevant challenge within the field of computer science. They will design and implement a practical software or systems-based solution that demonstrates advanced technical and analytical skills. The project must include a proposal, design documentation, development of a working product or prototype, and a final report and presentation that evaluates outcomes, challenges, and impact.

Comprehensive Examination

Students must pass a comprehensive examination that tests their knowledge and understanding of core computer science concepts, theories, and practices. The exam consists of two parts: the first is based on three foundational courses, and the second is based on two specialization courses.

Thesis Track

Students must complete a Thesis Defense, plus the following:

Course Code	Title	Credits
CS 601	Research Methods in Computer Science	3
CS 602	Master's Thesis	3
	Sub-Total Credits	**6**

Applied Project Track

Students must complete a Project Demo and White Paper Submission, plus the following:

Course Code	Title	Credits
CS 605	Applied Project	3
	3 Credits of Computer Science, Mathematics, or Physics Numbered 500 or Higher	3
	Sub-Total Credits	**6**

Examination Track

Students must complete a Comprehensive Examination, plus the following:

Course Code	Title	Credits
	6 Credits of Computer Science, Mathematics, or Physics Numbered 500 or Higher	6
	Sub-Total Credits	**6**

Transfer Credits

Graduate students may transfer up to 12 semester credits of graduate-level coursework into the Master of Science in Computer Science program. Transfer credits may include courses completed at DigiPen Institute of Technology or at other accredited institutions, subject to approval by the program director and in accordance with institutional transfer policies.

BS/MS in Computer Science Accelerated Schedule

DigiPen offers students the opportunity to complete a selected Bachelor of Science in Computer Science degree and Master of Science in Computer Science program in five years through an accelerated schedule. The accelerated schedule permits students who meet the requirements to take selected graduate-level courses during their undergraduate study and apply up to 12 credits towards both BS and MS degree requirements. Students who pursue the accelerated schedule will complete their BS CS Programs while at the same time beginning to extend their knowledge into the graduate-level curriculum. This gives student an opportunity to finish both degree programs in five years sequentially, first their BS CS Programs and then Master of Science in Computer Science in one year. Please refer to the *Accelerated BS/MS* degree program for more details.

	Total Credits	**30**

Course Sequencing

Exam Track - 12 Months

Semester 1 (Fall)

Course Code	Title	Credits
CS 525	Advanced C/C++	3
	CS 529 or CS 532	3
	CS 541 or CS 545	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Sub-Total Credits	**12**

Semester 2 (Spring)

Course Code	Title	Credits
	Project Course Numbered 500 or Higher	6
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Sub-Total Credits	**15**

Semester 3 (Summer)

Course Code	Title	Credits
	Project Course Numbered 500 or Higher	6
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Sub-Total Credits	**9**

Applied Project Track - 12 months

Semester 1 (Fall)

Course Code	Title	Credits
CS 525	Advanced C/C++	3
	CS 529 or CS 532	3
	CS 541 or CS 545	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Sub-Total Credits	**12**

Semester 2 (Spring)

Course Code	Title	Credits
	Project Course Numbered 500 or Higher	6
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Sub-Total Credits	**15**

Semester 3 (Summer)

Course Code	Title	Credits
	Project Course Numbered 500 or Higher	6
CS 605	Applied Project	3
	Sub-Total Credits	**9**

Thesis Track - 16 Months

Semester 1 (Fall)

Course Code	Title	Credits
CS 525	Advanced C/C++	3
	CS 529 or CS 532	3
	CS 541 or CS 545	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Sub-Total Credits	**12**

Semester 2 (Spring)

Course Code	Title	Credits
	Project Course Numbered 500 or Higher	6
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	3 Credit Computer Science, Mathematics, or Physics Elective	3
	Sub-Total Credits	**12**

Semester 3 (Summer)

Course Code	Title	Credits
	Project Course Numbered 500 or Higher	6
CS 601	Research Methods in Computer Science	3
	Sub-Total Credits	**9**

Semester 4 (Fall)

Course Code	Title	Credits
CS 602	Master's Thesis	3
	Sub-Total Credits	**3**

Computer Science and Digital Audio, Bachelor of Science

Program Overview

The Bachelor of Science in Computer Science and Digital Audio degree program is designed to prepare students for careers in software development with an emphasis on audio-related applications. The program includes instruction in computer audio, graphics, real-time simulation programming, and digital signal processing. The BS in Computer Science and Digital Audio degree program offers extensive instruction in basic science and software engineering fundamentals as well as instruction and project work in game development, audio technology, digital signal processing, and music and sound design. Graduates will have had the opportunity to work on individual and team-based projects to produce and implement software technology and audio content for video games, simulations, and other interactive media.

Student Learning Outcomes & Educational Objectives

In addition to having experience as programmers on multidisciplinary teams, BSCSDA graduates understand digital audio recording and processing as well as principles and tools of sound design, and are able to apply that understanding to the development of software and interactive media. Graduates of the BSCSDA program are able to apply knowledge of computing, mathematics, and digital signal processing to identify, formulate and solve complex computing problems. They are trained to acquire and apply new knowledge as needed, and to communicate effectively with team members from multiple disciplines. They also understand how to apply the principles of music and sound design in their work as software developers.

Career Outlook

Graduates of this program are prepared for entry- and intermediate-level positions such as Digital Audio Programmer, Audio Software Engineer, Audio Engine Programmer, Engine and Tools Programmer, Game Developer, Software Engineer, Software Developer, Computer Programmer, Audio Production Editor, Recording Engineer, Sound Designer, and Dialog Editor. This degree program also includes secondary training that can contribute directly to a graduate obtaining positions with titles such as Producer, Program Manager, Technical Program Manager, and Technical Writer, or many other Engineering, Programming, Scripting, Technical, Developer, Testing, Analysis, Design, or Production positions. After many years in the industry, graduates may obtain titles such as Lead Engineer, Lead Designer, Technical Director, Creative Director, and Director.

Degree / Minor Requirements

Number of Credits and GPA

The Bachelor of Science in Computer Science and Digital Audio degree program requires completion of 143 credits with a cumulative GPA of 2.0 or better. The program usually spans eight semesters of 15 weeks each, or four academic years.

Computer Science

The following courses are required:

Course Code	Title	Credits
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 225	Advanced C/C++	3
CS 230	Introduction to Game Engine Architecture	3
CS 245	Interactive Sound Synthesis	3
CS 246	Advanced Sound Synthesis	3
	CS 250 or CS 251	3
CS 280	Data Structures	3
CS 330	Algorithm Analysis	3
	Sub-Total Credits	**36**

Electrical and Computer Engineering

The following course is required:

Course Code	Title	Credits
ECE 101L	Introduction to Engineering Projects	1
	Sub-Total Credits	**1**

Film

The following course is required:

Course Code	Title	Credits
FLM 115	History of Film and Animation	3
	Sub-Total Credits	**3**

General Studies

The following courses are required:

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
COL 499	Career Search Preparation: Materials, Logistics, and Communication	1
	Sub-Total Credits	**2**

Humanities and Social Sciences

The following courses are required:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
LAW 115	Introduction to Intellectual Property and Contracts	3
	3 Credits of Humanities or Social Sciences Courses	3
	Sub-Total Credits	**12**

Mathematics

The following courses are required:

Course Code	Title	Credits
MAT 106	Precalculus	3
MAT 140	Linear Algebra and Geometry	4
	MAT 150 or MAT 180	4
	MAT 200 or MAT 230	4
MAT 258	Discrete Mathematics	3
MAT 320	Mathematics of Digital Signal Processing I	3
MAT 321	Mathematics of Digital Signal Processing II	3
	Sub-Total Credits	**24**

Music

The following courses are required:

Course Code	Title	Credits
MUS 120	Music Theory and Musicianship I	2
MUS 120L	Music Theory and Musicianship I Lab	1
MUS 370	Audio Design Project I	1
MUS 370L	Audio Design Project I Lab	2
MUS 371	Audio Design Project II	1
MUS 371L	Audio Design Project II Lab	2
MUS 470	Audio Design Project III	1
MUS 470L	Audio Design Project III Lab	2
MUS 471	Audio Design Projects IV	1
MUS 471L	Audio Design Project IV Lab	2
	2 Credits of Vocal Ensemble	2
	3 Credits of Music Courses	3
	Sub-Total Credits	**20**

Open Electives

Sufficient additional credits to meet the required 143 semester credits for the program.

	Sub-Total Credits	**3**

Physics

The following courses are required:

Course Code	Title	Credits
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
PHY 250	Waves, Optics, and Thermodynamics	4
PHY 250L	Waves, Optics, and Thermodynamics Lab	1
PHY 320	Acoustics I	3
	Sub-Total Credits	**13**

Projects

The following courses are required:

Course Code	Title	Credits
GAM 100	Project Introduction	3

GAM 150	Project I	3
GAM 200	Project II	4
GAM 250	Project II	4
GAM 300	Project III	4
GAM 350	Project III	4
	4 Credits of Game Projects Courses Numbered 375 or Higher	4
	Sub-Total Credits	**26**

STEM Elective

Course Code	Title	Credits
	3 Credits of Computer Science, Electrical and Computer Engineering, Mathematics, or Physics Numbered 200 or Higher	3
	Sub-Total Credits	**3**

Note on General Education Courses

The following courses satisfy the general education requirement for the Bachelor of Science in Computer Science and Digital Audio:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
FLM 115	History of Film and Animation	3
LAW 115	Introduction to Intellectual Property and Contracts	3
MAT 140	Linear Algebra and Geometry	4
MAT 150	Calculus and Analytic Geometry I	4
MAT 200	Calculus and Analytic Geometry II	4
PHY 200	Motion Dynamics	4
PHY 250	Waves, Optics, and Thermodynamics	4
	3 Credits of Humanities or Social Sciences Courses	3
	Sub-Total Credits	**35**
	Total Credits	**143**

Course Sequencing

Semester 1

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
ENG 110	Composition	3
GAM 100	Project Introduction	3
MAT 106	Precalculus	3
	Sub-Total Credits	**18**

Semester 2

Course Code	Title	Credits
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
MAT 140	Linear Algebra and Geometry	4
GAM 150	Project I	3
COM 150	Introduction to Communication	3
	Sub-Total Credits	**17**

Semester 3

Course Code	Title	Credits
CS 225	Advanced C/C++	3
CS 180	Operating Systems I: Man-Machine Interface	3
GAM 200	Project II	4
MAT 150	Calculus and Analytic Geometry I	4
CS 245	Interactive Sound Synthesis	3
	Sub-Total Credits	**17**

Semester 4

Course Code	Title	Credits
CS 251	Introduction to Computer Graphics	3
MAT 200	Calculus and Analytic Geometry II	4
CS 280	Data Structures	3
GAM 250	Project II	4
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1

	Sub-Total Credits	**19**

Semester 5

Course Code	Title	Credits
COL 499	Career Search Preparation: Materials, Logistics, and Communication	1
PHY 250	Waves, Optics, and Thermodynamics	4
PHY 250L	Waves, Optics, and Thermodynamics Lab	1
GAM 300	Project III	4
MUS 112	Dragon Chorus	1
MUS 120	Music Theory and Musicianship I	2
MUS 120L	Music Theory and Musicianship I Lab	1
MUS 370	Audio Design Project I	1
MUS 370L	Audio Design Project I Lab	2
	Sub-Total Credits	**17**

Semester 6

Course Code	Title	Credits
GAM 350	Project III	4
MAT 258	Discrete Mathematics	3
MAT 320	Mathematics of Digital Signal Processing I	3
MUS 112	Dragon Chorus	1
MUS 371	Audio Design Project II	1
MUS 371L	Audio Design Project II Lab	2
CS 246	Advanced Sound Synthesis	3
ECE 101L	Introduction to Engineering Projects	1
	Sub-Total Credits	**18**

Semester 7

Course Code	Title	Credits
CS 330	Algorithm Analysis	3
FLM 115	History of Film and Animation	3
GAM 375	Project III	4
MAT 321	Mathematics of Digital Signal Processing II	3
MUS 470	Audio Design Project III	1
MUS 470L	Audio Design Project III Lab	2
PHY 320	Acoustics I	3
	Sub-Total Credits	**19**

GAM 375: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 8

Course Code	Title	Credits
	Humanities and Social Sciences Elective	3
LAW 115	Introduction to Intellectual Property and Contracts	3
MUS 471	Audio Design Projects IV	1
MUS 471L	Audio Design Project IV Lab	2
	3 Credits of Music Courses	3
	Open Elective	3
	3 Credits of Computer Science, Electrical and Computer Engineering, Mathematics, or Physics Numbered 200 or Higher	3
	Sub-Total Credits	**18**

Computer Science and Game Design, Bachelor of Science

Program Overview

The field of digital entertainment relies on highly technical engineers working with creative designers to make immersive, engaging experiences for audiences around the world. This has created a growing demand for a hybrid engineer/designer: someone who has strong programming and mathematics skills, combined with formal training in game design. This type of developer is the bridge between the scientific and creative sides of game development, able to work as an engineer or designer as needed. They can use their technical skills to implement designs that are polished, efficient, and robust, while also being able to use their design skills through a technical lens when creating dynamic systems, levels, and user interfaces.

Graduate Skills and Experience

Graduates of this program will be trained to write computer programs in core languages such as C and C++, giving them the technical foundation to become proficient in programming with scripting languages, game logic, dynamic user interfaces, artificial intelligence, design tools, procedural generation, automation, and telemetry. Graduates will also be able to design and implement game levels,

game systems, and game behaviors. Graduates will have extensive experience testing, iterating, and polishing, through the completion of many individual projects and multiple team game projects.

Career Outlook

Graduates of this degree program will be prepared to enter the video game industry as entry-level Software Engineers and Game Designers. Possible entry-level position titles include Software Engineer, Software Developer, Software Development Engineer, Software Development Engineer in Test, Software Analyst, Computer Programmer, Gameplay Programmer, Artificial Intelligence Programmer, User Interface Programmer, Tools Programmer, Game Scripter, Technical Designer, System Designer, Level Designer, User Experience Designer, Content Designer, Encounter Designer, and Game Designer. This degree program also includes secondary training that can contribute directly to a graduate obtaining positions with titles such as Producer, Program Manager, Technical Program Manager, and Technical Writer, or many other Engineering, Programming, Scripting, Technical, Developer, Testing, Analysis, Design, or Production positions. After many years in the industry, graduates may obtain titles such as Lead Engineer, Lead Designer, Technical Director, Creative Director, and Director.

Degree / Minor Requirements

Number of Credits and GPA

The Bachelor of Science in Computer Science and Game Design requires completion of at least 133 semester credits with a cumulative GPA of 2.0 or better. The program spans eight semesters of 15 weeks each, or four academic years.

Computer Science

The following courses are required:

Course Code	Title	Credits
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 225	Advanced C/C++	3
CS 230	Introduction to Game Engine Architecture	3
CS 280	Data Structures	3
CS 330	Algorithm Analysis	3
	9 Credits of Other Computer Science Courses Numbered 200 or Higher	9
	Sub-Total Credits	**36**

Mathematics

The following courses are required:

Course Code	Title	Credits
MAT 106	Precalculus	3
MAT 140	Linear Algebra and Geometry	4
	MAT 150 or MAT 180	4
	MAT 200 or MAT 230	4
MAT 250	Linear Algebra	3
MAT 258	Discrete Mathematics	3
	Sub-Total Credits	**21**

Mathematics or Science Electives

Course Code	Title	Credits
	6 Credits of Mathematics, Natural Science, or Computer Science Courses	6
	Sub-Total Credits	**6**

Physics

The following courses are required:

Course Code	Title	Credits
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
	Sub-Total Credits	**5**

Team Projects

The following courses are required:

Course Code	Title	Credits
GAM 100	Project Introduction	3
GAM 150	Project I	3
	GAM 200 or CSP 200	4
	GAM 250 or CSP 250	4
	8 Credits of Team Project Courses Numbered 300 or Higher	8
	Sub-Total Credits	**22**

Design

The following courses are required:

Course Code	Title	Credits
DES 115	Introduction to Game Design	3
DES 215	Introduction to Technical Design	3
	9 Credits of Game Design Courses Numbered 200 or Higher	9
	Sub-Total Credits	**15**

Humanities and Social Sciences

The following courses are required:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
	9 Credits of Humanities and Social Sciences Courses	9
	Sub-Total Credits	**15**

General Studies

The following course is required:

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**1**

Open Electives

12 credits must be selected from any courses.

	Sub-Total Credits	**12**

Note on General Education Courses

The following courses satisfy the general education requirement for the Bachelor of Science in Computer Science and Game Design:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
	9 Credits of Humanities and Social Sciences Courses	9
MAT 106	Precalculus	3
MAT 140	Linear Algebra and Geometry	4
	MAT 150 or MAT 180	4
	MAT 200 or MAT 230	4
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
	Sub-Total Credits	**35**

	Total Credits	**133**

Course Sequencing

Fall Start

Semester 1: Fall

Course Code	Title	Credits
GAM 100	Project Introduction	3
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
MAT 106	Precalculus	3
	ENG 110 or COM 150	3
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**18**

Semester 2: Spring

Course Code	Title	Credits
GAM 150	Project I	3
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
	ENG 110 or COM 150	3
MAT 140	Linear Algebra and Geometry	4
	Sub-Total Credits	**17**

Semester 3: Fall

Course Code	Title	Credits
GAM 200	Project II	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 225	Advanced C/C++	3
MAT 150	Calculus and Analytic Geometry I	4

DES 115	Introduction to Game Design	3
	Sub-Total Credits	**17**

GAM 200, MAT 150: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 4: Spring

Course Code	Title	Credits
GAM 250	Project II	4
CS 280	Data Structures	3
DES 215	Introduction to Technical Design	3
MAT 200	Calculus and Analytic Geometry II	4
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
	Sub-Total Credits	**19**

GAM 250, MAT 200: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 5: Fall

Course Code	Title	Credits
GAM 300	Project III	4
CS 330	Algorithm Analysis	3
DES 212	System Design Methods	3
MAT 258	Discrete Mathematics	3
PSY 101	Introduction to Psychology	3
	Sub-Total Credits	**16**

GAM 300, DES 212, PSY 101: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 6: Spring

Course Code	Title	Credits
GAM 350	Project III	4
CS 380	Artificial Intelligence for Games	3
DES 214	Level Design Methods	3
MAT 250	Linear Algebra	3
	Humanities and Social Sciences Elective	3
	Sub-Total Credits	**16**

GAM 350, CS 380, DES 214: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 7: Fall

Course Code	Title	Credits
	GAM 375, GAM 400, or Other Course	3-4
	Computer Science Elective Numbered 200 or Higher	3
	Game Design Course Numbered 200 or Higher	3
	Mathematics, Natural Science, or Computer Science Course	3
	Open Elective	3
	Sub-Total Credits	**15-16**

Semester 8: Spring

Course Code	Title	Credits
	GAM 400, GAM 450, or Other Course	4
	Computer Science Elective Numbered 200 or Higher	3
	Humanities and Social Sciences Elective	3
	Mathematics, Natural Science, or Computer Science Course	3
	Open Elective	3
	Sub-Total Credits	**16**

Spring Start

Semester 1: Spring

Course Code	Title	Credits
GAM 100	Project Introduction	3
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
MAT 106	Precalculus	3
COM 150	Introduction to Communication	3
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**18**

Semester 2: Summer

Course Code	Title	Credits
GAM 150	Project I	3

CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
MAT 140	Linear Algebra and Geometry	4
	Sub-Total Credits	**14**

Semester 3: Fall

Course Code	Title	Credits
GAM 200	Project II	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 225	Advanced C/C++	3
MAT 150	Calculus and Analytic Geometry I	4
DES 115	Introduction to Game Design	3
	ENG 110 or COM 150	3
	Sub-Total Credits	**20**

GAM 200, MAT 150: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 4: Spring

Course Code	Title	Credits
GAM 250	Project II	4
CS 280	Data Structures	3
DES 215	Introduction to Technical Design	3
MAT 200	Calculus and Analytic Geometry II	4
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
	Sub-Total Credits	**19**

GAM 250, DES 215, MAT 200: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 5: Fall

Course Code	Title	Credits
GAM 300	Project III	4
CS 330	Algorithm Analysis	3
DES 212	System Design Methods	3
MAT 258	Discrete Mathematics	3
PSY 101	Introduction to Psychology	3
	Sub-Total Credits	**16**

GAM 300, DES 212: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 6: Spring

Course Code	Title	Credits
GAM 350	Project III	4
CS 380	Artificial Intelligence for Games	3
DES 214	Level Design Methods	3
MAT 250	Linear Algebra	3
	Humanities and Social Sciences Elective	3
	Sub-Total Credits	**16**

DES 214, GAM 350, CS 380: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 7: Fall

Course Code	Title	Credits
	GAM 375, GAM 400, or Other Course	3-4
	Computer Science Elective Numbered 200 or Higher	3
	Game Design Course Numbered 200 or Higher	3
	Mathematics, Natural Science, or Computer Science Course	3
	Open Elective	3
	Sub-Total Credits	**15-16**

Semester 8: Spring

Course Code	Title	Credits
	GAM 400, GAM 450, or Other Course	4
	Computer Science Elective Numbered 200 or Higher	3
	Humanities and Social Sciences Elective	3
	Mathematics, Natural Science, or Computer Science Course	3
	Open Elective	3
	Sub-Total Credits	**16**

Computer Science in Artificial Intelligence, Bachelor of Science

Program Overview

The Bachelor of Science in Computer Science in Artificial Intelligence prepares students to be competent computer scientists, software developers, data scientists, artificial intelligence and machine learning engineers/scientists. Graduates will be able to understand, apply and create mathematical models, and to develop and optimize software that can make use of data in obtaining meaningful conclusions and correct predictions.

Graduates of this program will be skilled at writing computer programs for the purposes of extracting and visualizing information. They will be proficient in mathematical and software development aspects of data science, artificial intelligence and machine learning. They will be able to use various tools such as Deep Learning and Distributed Data Management, in various applications such as Natural Language Processing and Computer Vision. Graduates will understand security, and the ethical implications and responsibilities.

Student Learning Outcomes & Educational Objectives
Student Learning Outcomes

Upon completion of the BS in Computer Science in Artificial Intelligence, students are expected to achieve the following outcomes:

1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.
7. Apply theory, techniques, and tools throughout the data science lifecycle and employ the resulting knowledge to satisfy stakeholders' needs.
8. Apply Artificial Intelligence and Machine Learning theory and techniques to solve various problems from technical or other fields.

Educational Objectives

Graduates of the Bachelor of Science in Computer Science in Artificial Intelligence Program:

- Will be competent data, machine learning, or AI engineers/scientists.
- Will possess a breadth of knowledge in the field of artificial intelligence and machine learning.
- Will be skilled software developers.
- Will have an in-depth understanding of computer science.
- Will be lifelong learners, keeping up to date with latest developments in AI
- Will understand the social impacts and the ethical aspects of computer science and AI

Career Outlook

Graduates of this degree program will be prepared to enter technical industries as entry-level data scientists or software engineers. Possible entry-level positions include Software Engineer, Software Developer, Software Development Engineer, Software Development Engineer in Test, Computer Programmer, Game Developer, Program Manager, Software Analyst, Application Analyst, Data Scientist, Data Engineer, AI engineer, AI software developer, Predictive Analyst, Machine Learning Software Developer, and Machine Learning Engineer.

Graduate Degree

Students in the BS in Computer Science in Artificial Intelligence program who are interested in pursuing a graduate degree at DigiPen or taking graduate level coursework during their undergraduate studies may participate in the "BS/MS in Computer Science Accelerated Schedule" option, which permits students to obtain the Bachelor of Science and Master of Science (both in Computer Science) degrees within five years. Students who meet the minimum requirements to take selected graduate-level courses during the junior and senior years of their undergraduate study can apply up to 12 credits towards both BS and MS degree requirements. Students who pursue the accelerated schedule can successfully complete their BS in Computer Science in Artificial Intelligence degree and Master of Science in Computer Science in five years sequentially. Please refer to the *BS/MS in Computer Science Accelerated Schedule* section for more details.

Degree / Minor Requirements

Number of Credits and GPA

The BS in Computer Science in Artificial Intelligence degree program requires completion of at least 134 credits with a cumulative GPA of 2.0 or better. The program usually spans eight semesters of 15 weeks each, for a total of four academic years.

Artificial Learning/Machine Learning Support Electives

Six credits must be selected from Artificial Intelligence or Machine Learning support electives:

Course Code	Title	Credits
CS 314	Distributed Data Management	3
CS 370	Computer Imaging	3
CS 374	Natural Language Processing	3
CS 380	Artificial Intelligence for Games	3
CS 381	Introduction to Artificial Intelligence	3
MAT 345	Data Science	3
	Artificial Intelligence/Machine Learning Elective	3
	Sub-Total Credits	**6**

Computer Science

The following courses are required:

Course Code	Title	Credits
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 205	Professional and Societal Issues in Computing	3
CS 211	Introduction to Databases	3
CS 225	Advanced C/C++	3
CS 230	Introduction to Game Engine Architecture	3
CS 232	Introductory Data Analysis	3
CS 280	Data Structures	3
CS 330	Algorithm Analysis	3
CS 372	Machine Learning and Artificial Intelligence I	3
CS 373	Machine Learning and Artificial Intelligence II	3
CS 376	Deep Learning	3
	Sub-Total Credits	**45**

General Studies

The following course is required:

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**1**

Humanities and Social Sciences

The following courses are required:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
	9 Credits of Humanities and Social Sciences Courses	9
	Sub-Total Credits	**15**

Mathematics

The following courses are required:

Course Code	Title	Credits
MAT 106	Precalculus	3
MAT 140	Linear Algebra and Geometry	4
	MAT 150 or MAT 180	4
	MAT 200 or MAT 230	4
MAT 250	Linear Algebra	3
MAT 258	Discrete Mathematics	3
MAT 340	Probability and Statistics	3
	Sub-Total Credits	**24**

Mathematics or Science Elective

Course Code	Title	Credits
	Mathematics, Natural Science, or Computer Science Course	3
	Sub-Total Credits	**3**

Open Electives

Nine credits must be selected from any courses.

	Sub-Total Credits	**9**

Physics

The following courses are required:

Course Code	Title	Credits
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1

PHY 250	Waves, Optics, and Thermodynamics	4
	Sub-Total Credits	**9**

Projects

The following courses are required:

Course Code	Title	Credits
GAM 100	Project Introduction	3
GAM 150	Project I	3
	GAM 200 or CSP 200	4
	GAM 250 or CSP 250	4
	8 Credits of Team Project Courses Numbered 300 or Higher	8
	Sub-Total Credits	**22**

Note on General Education Courses

The following courses satisfy the general education requirement for the Bachelor of Science in Computer Science in Artificial Intelligence:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
	English Course	3
MAT 140	Linear Algebra and Geometry	4
	MAT 150 or MAT 180	4
	MAT 200 or MAT 230	4
CS 205	Professional and Societal Issues in Computing	3
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
PHY 250	Waves, Optics, and Thermodynamics	4
PHY 250L	Waves, Optics, and Thermodynamics Lab	1
	Humanities and Social Sciences Elective	3
	Sub-Total Credits	**37**

	Total Credits	**134**

Course Sequencing

Fall Start

Semester 1: Fall

Course Code	Title	Credits
GAM 100	Project Introduction	3
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
	ENG 110 or COM 150	3
MAT 106	Precalculus	3
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**18**

Semester 2: Spring

Course Code	Title	Credits
GAM 150	Project I	3
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
MAT 140	Linear Algebra and Geometry	4
	ENG 110 or COM 150	3
	Sub-Total Credits	**17**

Semester 3: Fall

Course Code	Title	Credits
GAM 200	Project II	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 232	Introductory Data Analysis	3
CS 225	Advanced C/C++	3
MAT 150	Calculus and Analytic Geometry I	4
	Sub-Total Credits	**17**

GAM 200, MAT 150: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 4: Spring

Course Code	Title	Credits
GAM 250	Project II	4
CS 280	Data Structures	3

MAT 200	Calculus and Analytic Geometry II	4
CS 372	Machine Learning and Artificial Intelligence I	3
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
	Sub-Total Credits	**19**

MAT 200, GAM 250: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 5: Fall

Course Code	Title	Credits
CSP 300	Computer Science Project III	4
CS 330	Algorithm Analysis	3
MAT 258	Discrete Mathematics	3
CS 373	Machine Learning and Artificial Intelligence II	3
CS 211	Introduction to Databases	3
	Sub-Total Credits	**16**

CSP 300: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 6: Spring

Course Code	Title	Credits
CSP 350	Computer Science Project III	4
CS 205	Professional and Societal Issues in Computing	3
	Humanities and Social Sciences Elective	3
CS 376	Deep Learning	3
MAT 340	Probability and Statistics	3
	Sub-Total Credits	**16**

CSP 350: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 7: Fall

Course Code	Title	Credits
	CSP 400 or Other Course	3
	Artificial Intelligence/Machine Learning Elective	3
PHY 250	Waves, Optics, and Thermodynamics	4
	Humanities and Social Sciences Elective	3
MAT 250	Linear Algebra	3
	Sub-Total Credits	**16**

Semester 8: Spring

Course Code	Title	Credits
	CSP 450 or Other Computer Science Projects Course	3
	Artificial Intelligence/Machine Learning Elective	3
	Humanities and Social Sciences Elective	3
	Mathematics, Natural Science, or Computer Science Course	3
	Open Elective	3
	Sub-Total Credits	**15**

Spring Start

Semester 1: Spring

Course Code	Title	Credits
GAM 100	Project Introduction	3
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
ENG 110	Composition	3
MAT 106	Precalculus	3
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**18**

Semester 2: Summer

Course Code	Title	Credits
GAM 150	Project I	3
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
MAT 140	Linear Algebra and Geometry	4
	Sub-Total Credits	**14**

Semester 3: Fall

Course Code	Title	Credits
GAM 200	Project II	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 232	Introductory Data Analysis	3
CS 225	Advanced C/C++	3
MAT 150	Calculus and Analytic Geometry I	4
	Sub-Total Credits	**17**

GAM 200, MAT 150: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 4: Spring

Course Code	Title	Credits
GAM 250	Project II	4
CS 280	Data Structures	3
MAT 200	Calculus and Analytic Geometry II	4
CS 372	Machine Learning and Artificial Intelligence I	3
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
	Sub-Total Credits	**19**

GAM 250, MAT 200: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 5: Fall

Course Code	Title	Credits
CSP 300	Computer Science Project III	4
CS 330	Algorithm Analysis	3
MAT 258	Discrete Mathematics	3
COM 150	Introduction to Communication	3
CS 373	Machine Learning and Artificial Intelligence II	3
CS 211	Introduction to Databases	3
	Sub-Total Credits	**19**

CSP 300: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 6: Spring

Course Code	Title	Credits
CSP 350	Computer Science Project III	4
CS 205	Professional and Societal Issues in Computing	3
	Humanities and Social Sciences Elective	3
CS 376	Deep Learning	3
MAT 340	Probability and Statistics	3
	Sub-Total Credits	**16**

CSP 350: Other courses may fulfill this requirement. See degree program requirements for details.

Semester 7: Fall

Course Code	Title	Credits
	CSP 400 or Other Course	3
	Artificial Intelligence/Machine Learning Elective	3
PHY 250	Waves, Optics, and Thermodynamics	4
	Humanities and Social Sciences Elective	3
MAT 250	Linear Algebra	3
	Sub-Total Credits	**16**

Semester 8: Spring

Course Code	Title	Credits
	CSP 450 or Other Computer Science Projects Course	3
	Artificial Intelligence/Machine Learning Elective	3
	Humanities and Social Sciences Elective	3
	Mathematics, Natural Science, or Computer Science Course	3
	Open Elective	3
	Sub-Total Credits	**15**

Computer Science in Real-Time Interactive Simulation, Bachelor of Science

Program Overview

The Bachelor of Science in Computer Science in Real-Time Interactive Simulation (RTIS) degree program at DigiPen aims to produce

graduates who are exceptionally competent software engineers and practitioners. Their work is notable for its technical excellence and innovation for effective application to real-world problem solving. Their body of work impacts fields related to digital media, software development, real-time simulations, and game development. Our graduates possess sound professional skills that include design, implementation, testing, deployment, and maintenance of real-world software solutions in a team-based environment. They are prepared and motivated for a lifetime of independent, reflective learning and critical thinking, and engage proactively with issues related to societal impacts of their work on both a local and global scale.

Student Learning Outcomes & Educational Objectives

Towards achieving the above objectives, upon completion of the RTIS program, students are expected to achieve the following outcomes:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

Career Outlook

Graduates of this degree program will possess entry-level skills to work in the video games industry, or software developer positions in various industries such as digital

entertainment, consumer electronics, large-scale software development, and defense. Specific areas of focus include artificial intelligence, computer graphics, database design and development, information systems, multimedia, networking, numerical simulations, physically-based rendering, and real-time interactivity.

Potential entry-level position titles for new graduates include: Artificial Intelligence Developer, Computer Graphics Developer, Computer Programmer, Computer Scientist, Gameplay Programmer, Game Engine Developer, Game Engine Programmer, Graphics Programmer, Networking Programmer, Physics Programmer, Software Analyst, Software Developer, Software Development Engineer, Software Development Engineer in Test, Software Engineer, Tools Developer, Tools Programmer, User-Interface Programmer, Web Developer, Web Programmer and Web Engineer.

For details about graduation rates, median debt for students who complete this program, and other important information visit https://www.digipen.edu/disclosures

Graduate Degree

Students in the BS in Computer Science in Real-Time Interactive Simulation program who are interested in pursuing a graduate degree at DigiPen or taking graduate level coursework during their undergraduate studies may participate in the "BS/MS in Computer Science Accelerated Schedule" option, which permits students to obtain the Bachelor of Science and Master of Science (both in Computer Science) degrees within five years. Students who meet the minimum requirements to take selected graduate-level courses during the junior and senior years of their undergraduate study can apply up to 12 credits towards both BS and MS degree requirements. Students who pursue the accelerated schedule can successfully complete their BS in Computer Science in Real-Time Interactive Simulation degree and Master of Science in Computer Science in five years sequentially. Please refer to the BS/MS in Computer Science Accelerated Schedule section for more details.

Degree / Minor Requirements

Number of Credits and GPA

The Bachelor of Science in Computer Science in Real-Time Interactive Simulation degree program requires completion of at least 134 credits with a cumulative GPA of 2.0 or better. The program usually spans eight semesters of 15 weeks each, or a total of four academic years.

Arts and Media

Students are required to take any three credits from Art, Digital Art, Film, Game Design or Music courses.

Course Code	Title	Credits
	3 Credits of Art, Digital Art, Film, Game Design, or Music Courses	3
	Sub-Total Credits	**3**

Computer Science

The following courses are required:

Course Code	Title	Credits
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 225	Advanced C/C++	3
CS 230	Introduction to Game Engine Architecture	3

CS 280	Data Structures	3
CS 330	Algorithm Analysis	3
	9 Credits of Computer Science Courses Numbered 200 or Higher	9
	Sub-Total Credits	**36**

General Studies

The following course is required:

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**1**

Humanities and Social Sciences

The following courses are required:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
	6 Credits of English Courses	6
	3 Credits of Humanities or Social Sciences Courses	3
	Sub-Total Credits	**15**

Mathematics

The following courses are required:

Course Code	Title	Credits
MAT 106	Precalculus	3
MAT 140	Linear Algebra and Geometry	4
	MAT 150 or MAT 180	4
	MAT 200 or MAT 230	4
MAT 250	Linear Algebra	3
MAT 258	Discrete Mathematics	3
MAT 340	Probability and Statistics	3
	Sub-Total Credits	**24**

Natural Science

The following courses are required:

Course Code	Title	Credits
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
PHY 250	Waves, Optics, and Thermodynamics	4
	Sub-Total Credits	**9**

Open Electives

Six credits must be selected from any course.

	Sub-Total Credits	**6**

Program Focus

The following courses are required:

Course Code	Title	Credits
CS 200	Computer Graphics I	3
CS 250	Computer Graphics II	3
CS 300	Advanced Computer Graphics I	3
CS 315	Low-Level Programming	3
CS 350	Advanced Computer Graphics II	3
	Sub-Total Credits	**15**

Social Impact of Computing

The following course is required:

Course Code	Title	Credits
CS 205	Professional and Societal Issues in Computing	3
	Sub-Total Credits	**3**

Team Projects

The following courses are required:

Course Code	Title	Credits
GAM 100	Project Introduction	3
GAM 150	Project I	3
	GAM 200 or CSP 200	4
	GAM 250 or CSP 250	4
	8 Credits of Team Project Courses Numbered 300 or Higher	8
	Sub-Total Credits	**22**

Note on General Education Courses

The following courses satisfy the general education requirement for the Bachelor of Science in Computer Science in Real-Time Interactive Simulation:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
CS 205	Professional and Societal Issues in Computing	3
ENG 110	Composition	3
	6 Credits of English Courses	6
	Humanities and Social Sciences Elective	3
	MAT 150 or MAT 180	4
MAT 250	Linear Algebra	3
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
PHY 250	Waves, Optics, and Thermodynamics	4
	Sub-Total Credits	**34**

	Total Credits	**134**

Course Sequencing

Fall Start

Semester 1: Fall

Course Code	Title	Credits
MAT 106	Precalculus	3
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
	ENG 110 or COM 150	3
COL 101	College Life and Academic Skills	1
GAM 100	Project Introduction	3
	Sub-Total Credits	**18**

Semester 2: Spring

Course Code	Title	Credits
MAT 140	Linear Algebra and Geometry	4
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
	ENG 110 or COM 150	3
GAM 150	Project I	3
	Sub-Total Credits	**17**

Semester 3: Fall

Course Code	Title	Credits
	MAT 150 or MAT 180	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 200	Computer Graphics I	3
CS 225	Advanced C/C++	3
GAM 200	Project II	4
	Sub-Total Credits	**17**

GAM 200: Other courses may fulfill this requirement. See Degree Program Requirements for details.

Semester 4: Spring

Course Code	Title	Credits
	MAT 200 or MAT 230	4
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
CS 250	Computer Graphics II	3
CS 280	Data Structures	3
GAM 250	Project II	4
	Sub-Total Credits	**19**

Semester 5: Fall

Course Code	Title	Credits
MAT 258	Discrete Mathematics	3
PHY 250	Waves, Optics, and Thermodynamics	4
CS 300	Advanced Computer Graphics I	3
CS 330	Algorithm Analysis	3
GAM 300	Project III	4
	Sub-Total Credits	**17**

Semester 6: Spring

Course Code	Title	Credits
MAT 340	Probability and Statistics	3
CS 350	Advanced Computer Graphics II	3
	English Course	3
CS 205	Professional and Societal Issues in Computing	3
GAM 350	Project III	4
	Sub-Total Credits	**16**

Semester 7: Fall

Course Code	Title	Credits
MAT 250	Linear Algebra	3
CS 315	Low-Level Programming	3
	Computer Science Elective Numbered 200 or Higher	3
	3 Credits of Art, Digital Art, Film, Game Design, or Music Courses	3
	GAM 375, GAM 400, or Other Course	3-4
	Sub-Total Credits	**15-16**

Semester 8: Spring

Course Code	Title	Credits
	English Course	3
	Computer Science Elective Numbered 200 or Higher	3
	Computer Science Elective Numbered 200 or Higher	3
	Humanities and Social Sciences Elective	3
	GAM 400, GAM 450, or Other Course	4
	Sub-Total Credits	**16**

Spring Start

Semester 1: Spring

Course Code	Title	Credits
CS 100	Computer Environment	4
CS 120	High-Level Programming I: The C Programming Language	4
COL 101	College Life and Academic Skills	1
	ENG 110 or COM 150	3
GAM 100	Project Introduction	3
MAT 106	Precalculus	3
	Sub-Total Credits	**18**

Semester 2: Summer

Course Code	Title	Credits
CS 170	High-Level Programming II: The C++ Programming Language	4
CS 230	Introduction to Game Engine Architecture	3
MAT 140	Linear Algebra and Geometry	4
GAM 150	Project I	3
	Sub-Total Credits	**14**

Semester 3: Fall

Course Code	Title	Credits
	MAT 150 or MAT 180	4
CS 180	Operating Systems I: Man-Machine Interface	3
CS 200	Computer Graphics I	3
CS 225	Advanced C/C++	3
GAM 200	Project II	4
	ENG 110 or COM 150	3
	Sub-Total Credits	**20**

Semester 4: Spring

Course Code	Title	Credits
	MAT 200 or MAT 230	4
PHY 200	Motion Dynamics	4
PHY 200L	Motion Dynamics Laboratory	1
CS 250	Computer Graphics II	3
CS 280	Data Structures	3
GAM 250	Project II	4
	Sub-Total Credits	**19**

Semester 5: Fall

Course Code	Title	Credits
MAT 258	Discrete Mathematics	3
PHY 250	Waves, Optics, and Thermodynamics	4
CS 300	Advanced Computer Graphics I	3
CS 330	Algorithm Analysis	3
GAM 300	Project III	4
	Sub-Total Credits	**17**

GAM 300: Other courses may fulfill this requirement. See Degree Program Requirements for details.

Semester 6: Spring

Course Code	Title	Credits
CS 205	Professional and Societal Issues in Computing	3
CS 350	Advanced Computer Graphics II	3
MAT 340	Probability and Statistics	3
GAM 350	Project III	4
	English Course	3
	Sub-Total Credits	**16**

GAM 350: Other courses may fulfill this requirement. See Course Sequencing Program Requirements for details.

Semester 7: Fall

Course Code	Title	Credits
	GAM 375, GAM 400, or Other Course	3-4
CS 315	Low-Level Programming	3
	Computer Science Elective Numbered 200 or Higher	3
MAT 250	Linear Algebra	3
	3 Credits of Art, Digital Art, Film, Game Design, or Music Courses	3
	Sub-Total Credits	**15-16**

Semester 8: Spring

Course Code	Title	Credits
	English Course	3
	Computer Science Elective Numbered 200 or Higher	3
	Computer Science Elective Numbered 200 or Higher	3
	Humanities and Social Sciences Elective	3
	GAM 400, GAM 450, or Other Course	4
	Sub-Total Credits	**16**

Digital Art and Animation, Bachelor of Fine Arts

Program Overview

The Bachelor of Fine Arts in Digital Art and Animation degree program is designed to prepare students for careers in the digital arts. In this program students are challenged to tell visual stories through individual projects, team-based projects, and other coursework. This begins with a strong foundation in visual art, followed by focused courses of study in animation, rigging, character creation, and environment creation. These topics are applied in projects using production skills and pipelines adapted from the professional world. Undergraduates may choose to focus in multiple areas of interest through specialization courses, projects, and electives.

Graduates of the Bachelor of Fine Arts in Digital Art and Animation degree program will be prepared to create quality visual work with a range of software and technical tools, augmented by their traditional art skills. Additionally, graduates will be proficient in interpersonal communication, team dynamics, professional practices, design, and critical thinking skills. This will be supported through general education courses, ranging from storytelling and art history to programming and natural science.

Student Learning Outcomes & Educational Objectives

Upon completion of the Bachelor of Fine Arts in Digital Arts and Animation degree program, students are expected to achieve the following outcomes:

- Demonstrate proficiency in drawing and painting with traditional art and media.
- Demonstrate proficiency in drawing and painting from observation.
- Apply the principles of color theory and composition
- Demonstrate proficiency in 2D and 3D design.
- Demonstrate the principles of animation through 2D and 3D techniques.
- Demonstrate clear visual storytelling.
- Demonstrate a structured art design and production process.
- Demonstrate proficiency in art production software.
- Demonstrate proficiency in hard-surface and organic modeling.
- Demonstrate the ability to communicate and collaborate effectively within teams.

- Demonstrate fluency in at least two specializations, including the following disciplines: Character Art, Environment Art, Rigging, and Animation.
- Understand the various aspects of professional development and career planning.
- Understand the professional, social, and ethical responsibilities of digital art and animation.
- Demonstrate creative and critical thinking skills, information literacy, technological literacy, quantitative literacy, scientific literacy, and written, verbal, and non-verbal communication skills.

Career Outlook

Graduates of the program are prepared for the following entry- and intermediate-level positions: Animator, Character Artist, Environment Artist, Hard Surface Modeler, Digital Sculptor, Technical Artist, Concept Artist, Visual Designer, Illustrator, UI Designer, Rigger, Lighter, Texture Artist, Visual Effects Artist, Storyboard Artist, Sculptor, Producer, Project Manager, and Art Instructor.

Degree / Minor Requirements

Number of Credits and GPA

The Bachelor of Fine Arts in Digital Art and Animation degree program requires completion of at least 126 credits with a cumulative GPA of 2.0 or better. The program usually spans eight semesters of 15 weeks each, or four academic years.

Animation

The following courses are required:

Course Code	Title	Credits
ANI 1000	Animation I	3
ANI 2000	Animation II	3
	Sub-Total Credits	**6**

Art

The following courses are required:

Course Code	Title	Credits
ART 1000	Survey of Art History	3
ART 1100	Drawing Design I	3
ART 1120	Drawing Design II	3
ART 1200	Light and Color I	3
ART 1220	Light and Color II	3
ART 2110	Figure Drawing & Anatomy	3
ART 2050	Visual Development for Production	3
ART 3050	Portfolio	3
	Sub-Total Credits	**24**

Computer Graphics

The following courses are required:

Course Code	Title	Credits
CG 2000	2D Digital Art	3
CG 2001	3D Digital Art	3
	Sub-Total Credits	**6**

Computer Science

Course Code	Title	Credits
	3 Credits of Computer Science Courses	3
	Sub-Total Credits	**3**

Film and Game History

One of the following courses is required:

Course Code	Title	Credits
	FLM 115 or DES 205	3
	Sub-Total Credits	**3**

General Studies

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**1**

Humanities and Social Science

The following courses are required:

Course Code	Title	Credits
ENG 116	Fundamentals of Storytelling	3
	3 Credit English Elective Numbered 150 or Higher	3
COM 250	Professional Communication	3
	6 Credits of Humanities and Social Sciences Courses	6
	Sub-Total Credits	**15**

Natural Science

Three credits of Natural Science courses are required.

Course Code	Title	Credits
	3 Credits of Natural Science Courses	3
	Sub-Total Credits	**3**

Open Electives

Sufficient additional credits to meet the required 126 semester credits for the program.

	Sub-Total Credits	**3**

Projects

The following courses are required:

Course Code	Title	Credits
PRJ 1000	Introduction to Production	3
	12 Credits of Project Courses	12
	8 Credits of Project or Internship Courses	8
	Sub-Total Credits	**23**

Specialization Courses

Course Code	Title	Credits
	9 Credits from ANI 2002, ANI 3301, ANI 3501, CG 2002, CG 3101, or CG 3201	9
	6 Credits from ANI 3302, ANI 3502, CG 3102, or CG 3202	6
	3 Credits from ANI 3303, ANI 3503, CG 3103, or CG 3203	3
	Sub-Total Credits	**18**

Specialization Electives

Course Code	Title	Credits
	9 Credits of Fine Arts, Animation, Film, or Computer Graphics Courses Numbered 2000 or Higher	9
	9 Credits of Fine Arts, Animation, Film, Computer Graphics, or Capstone Project Courses Numbered 3000 or Higher	9
	Sub-Total Credits	**18**

General Education

Three credits of General Education courses, including Humanities and Social Sciences, and Mathematics, Music, and Natural Science.

Course Code	Title	Credits
	3 Credits of General Education Courses	3
	Sub-Total Credits	**3**

Note on General Education Courses

The following courses satisfy the general education requirement for the Bachelor of Fine Arts in Digital Art and Animation:

Course Code	Title	Credits
ART 1000	Survey of Art History	3
ENG 116	Fundamentals of Storytelling	3
	3 Credit English Elective Numbered 150 or Higher	3
	FLM 115 or DES 205	3
	3 Credits of Computer Science Courses	3
COM 250	Professional Communication	3
	3 Credits of Natural Science Courses	3
	3 Credits of General Education Courses	3
	6 Credits of Humanities and Social Sciences Courses	6
	Sub-Total Credits	**30**

	Total Credits	**126**

Course Sequencing

Fall Start

Semester 1: Fall

Course Code	Title	Credits
ART 1000	Survey of Art History	3
ART 1100	Drawing Design I	3
ART 1200	Light and Color I	3
COL 101	College Life and Academic Skills	1
ENG 116	Fundamentals of Storytelling	3
	FLM 115 or DES 205	3
	Sub-Total Credits	**16**

Semester 2: Spring

Course Code	Title	Credits
PRJ 1000	Introduction to Production	3
ANI 1000	Animation I	3
ART 1120	Drawing Design II	3
ART 1220	Light and Color II	3
ART 2110	Figure Drawing & Anatomy	3
	Sub-Total Credits	**15**

Semester 3: Fall

Course Code	Title	Credits
	PRJ 2000 or PRJ 2001	4
ANI 2000	Animation II	3
CG 2000	2D Digital Art	3
CG 2001	3D Digital Art	3
CS 115	Introduction to Scripting and Programming	3
	Sub-Total Credits	**16**

Semester 4: Spring

Course Code	Title	Credits
	PRJ 2050 or PRJ 2051	4
	CG 2002 or ANI 2002	3
ART 2050	Visual Development for Production	3
	3 Credit English Elective Numbered 150 or Higher	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 2000 or Higher	3
	Sub-Total Credits	**16**

Semester 5: Fall

Course Code	Title	Credits
	PRJ 3000 or PRJ 3001	4
COM 250	Professional Communication	3
	CG 3101, CG 3201, ANI 3301 or ANI 3501	3
	CG 3101, CG 3201, ANI 3301 or ANI 3501	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 2000 or Higher	3
	Sub-Total Credits	**16**

Semester 6: Spring

Course Code	Title	Credits
	PRJ 3050 or PRJ 3051	3
	3 Credit HSS Elective	3
	CG 3102, CG 3202, ANI 3302 or ANI 3502	3
	CG 3102, CG 3202, ANI 3302 or ANI 3502	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 2000 or Higher	3
	Sub-Total Credits	**15**

Semester 7: Fall

Course Code	Title	Credits
	PRJ 3075 or PRJ 3076	3
ART 3050	Portfolio	3
	3 Credit HSS Elective	3
	3 Credits from ANI 3303, ANI 3503, CG 3103, or CG 3203	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 3000 or Higher	3
	Sub-Total Credits	**15**

Semester 8: Spring

Course Code	Title	Credits

	PRJ 4000, PRJ 4001, Internship, or 3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 3000 or Higher	3
	Open Elective	3
	3 Credit Natural Science Course	3
	3 Credit General Education Course	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 3000 or Higher	3
	Sub-Total Credits	**15**

Spring Start

Semester 1: Spring

Course Code	Title	Credits
ART 1000	Survey of Art History	3
ART 1100	Drawing Design I	3
ART 1200	Light and Color I	3
COL 101	College Life and Academic Skills	1
ENG 116	Fundamentals of Storytelling	3
PRJ 1000	Introduction to Production	3
	Sub-Total Credits	**16**

Semester 2: Summer

Course Code	Title	Credits
ANI 1000	Animation I	3
ART 1120	Drawing Design II	3
ART 1220	Light and Color II	3
ART 2110	Figure Drawing & Anatomy	3
	Sub-Total Credits	**12**

Semester 3: Fall

Course Code	Title	Credits
ANI 2000	Animation II	3
	PRJ 2000 or PRJ 2001	4
CG 2000	2D Digital Art	3
CG 2001	3D Digital Art	3
CS 115	Introduction to Scripting and Programming	3
	Sub-Total Credits	**16**

Semester 4: Spring

Course Code	Title	Credits
	CG 2002 or ANI 2002	3
ART 2050	Visual Development for Production	3
	3 Credit English Elective Numbered 150 or Higher	3
	PRJ 2050 or PRJ 2051	4
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 2000 or Higher	3
	Sub-Total Credits	**16**

Semester 5: Fall

Course Code	Title	Credits
	PRJ 3000 or PRJ 3001	4
COM 250	Professional Communication	3
	CG 3101, CG 3201, ANI 3301 or ANI 3501	3
	CG 3101, CG 3201, ANI 3301 or ANI 3501	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 2000 or Higher	3
	FLM 115 or DES 205	3
	Sub-Total Credits	**19**

Semester 6: Spring

Course Code	Title	Credits
	PRJ 3050 or PRJ 3051	3
	3 Credit HSS Elective	3
	CG 3102, CG 3202, ANI 3302 or ANI 3502	3
	CG 3102, CG 3202, ANI 3302 or ANI 3502	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 2000 or Higher	3
	Sub-Total Credits	**15**

Semester 7: Fall

Course Code	Title	Credits
	PRJ 3075 or PRJ 3076	3
ART 3050	Portfolio	3
	3 Credit HSS Elective	3
	CG 3102, CG 3202, ANI 3302 or ANI 3502	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 3000 or Higher	3
	Sub-Total Credits	**15**

Semester 8: Spring

Course Code	Title	Credits
	PRJ 4000, PRJ 4001, Internship, or 3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 3000 or Higher	3
	Open Elective	3
	3 Credit Natural Science Course	3
	3 Credit General Education Course	3
	3 Credit Art, Computer Graphics, Animation, or Film Course Numbered 3000 or Higher	3
	Sub-Total Credits	**15**

Digital Arts, Master of Fine Arts

Program Overview

The Master of Fine Arts in Digital Arts degree program delivers delivers graduate-level education rooted in traditional art-making knowledge, and emphasizes creativity and personal voice. The application of these skills in a digital context prepares graduates for careers in the 3D graphics and interactive media industries. Graduates will have the tools and vision to become leaders advancing the artistic styling of video games, animated films, and related digital media.

The MFA in Digital Arts degree program emphasizes the mastery of foundational studies in art, which support coinciding courses in art as a digital medium. Graduates will be well-versed in traditional art studies of their choosing, including anatomy, figure drawing, sculpture, and painting. They will also be proficient in their choice of character or concept design, digital sculpting, hard surface modeling, lighting, texturing, rendering, rigging, and the integration of these stages into a project. Innovative digital work for a thesis project is created by combining these studies with original research.

Candidates for the MFA in Digital Arts will focus their work around a central theme of study and demonstrate mastery of the chosen field through the production of a thesis project. Graduates' portfolios must exhibit a level of proficiency commensurate with specialists in the industry. Graduates will be qualified for positions with titles such as 3D Artist, 3D Modeler, Character Artist, Technical Artist, Texture Artist, Environment Artist, and Art Instructor. In addition, after some years of experience, MFA in Digital Arts graduates may attain positions with titles such as Art Lead, Art Director, Senior Artist, Senior Character Artist, and College Professor.

Student Learning Outcomes & Educational Objectives

Graduates of the MFA in Digital Arts will have demonstrated the following learning outcomes:

- Create a significant original digital arts project demonstrating an idea or belief.
- Produce artistic work that is a synthesis of applied research adapted to new purposes.
- Develop artwork through a process of intention, research, design, execution, assessment, and polish.
- Generate artwork with a strong aesthetic appeal through an applied understanding of formal art qualities.
- Independently investigate and resolve solutions to artistic and technical problems.
- Communicate the process and results of their ideas in both written and oral forms. • Practice fundamental team dynamics, including team collaboration and problem solving.
- Apply project management techniques including milestone planning, task definition, and prioritization.
- Understand a broad array of digital arts topics.
- Discover alternative pathways and tools for solving visual arts problems.

Degree / Minor Requirements

Number of Credits and GPA

The MFA in Digital Arts requires completion of at least 60 semester credits with a grade "C" (or 2.0 quality points) or above in each course and a cumulative GPA of 3.0 or better. The program typically spans five semesters of 15 weeks each (12 in the Summer), generally accomplished in two calendar years including the summer session for students following the full-time recommended course sequence, and four calendar years for students following the part-time recommended course sequence.

Digital Arts

The following computer graphics courses are required:

Course Code	Title	Credits
CG 5000	2D Digital Art	3
CG 5001	3D Digital Art	3
CG 5002	Organic and Hard Surface Modeling	3
	Sub-Total Credits	**9**

Projects and Thesis

The following courses are required:

Course Code	Title	Credits
PRJ 6001	Digital Arts Survey and Analysis	3
PRJ 6002	Digital Art Production Process	3
PRJ 7000	Thesis Pre-Production	3
PRJ 7001	Thesis I	6
PRJ 7002	Thesis II	6
	Sub-Total Credits	**21**

Fine Arts

The following course is required:

Course Code	Title	Credits
ART 5001	Art Research and Methodology	3
	Sub-Total Credits	**3**

Elective

In addition to the required courses, students must take nine electives for a total of 27 credits. Each course taken can only count for one of following categories. The elective categories are as follows:

Course Code	Title	Credits
	Core Elective Category	15
	Studio Art Elective Category	6
	Visual Development Elective Category	3
	Open Elective	3
	Sub-Total Credits	**27**

Note

Within the electives are the optional Specialization Sequences, with sequence pre-requisites noted below through indentation.

- Character Creation I
  - Character Creation II
    - Character Creation III
- Environment Creation I
  - Environment Creation II
    - Environment Creation III
- Introduction to Character Rigging and Animation
  - Character Rigging I
    - Character Rigging II
    - Character Rigging III
  - 3D Animation I
    - 3D Animation II
    - 3D Animation III

Graduation Requirements

In order to graduate from the program, students must demonstrate:

- Successful completion of 60 semester credits with a cumulative grade point average of 3.0 or better.
- Successful presentation and official acceptance of the Final Thesis at Thesis Presentation. This can only happen after 60 credits of coursework are completed (or in progress) and the student has taken and passed PRJ 7002 (or is in progress).
- Submission of an archived copy for the DigiPen Library of the thesis and documentation.

Thesis Requirements

Thesis Proposal Review

Candidates in the MFA in Digital Arts who are completing PRJ 7000 must schedule and present their thesis proposal to an assembled thesis committee. No student may register for PRJ 7001 without approval of their thesis committee.

Thesis Requirement

The goal of the DigiPen MFA in Digital Arts is to develop industry-quality graduates who have an innovative, creative and well-considered point of view. The MFA in Digital Arts thesis is a body of work that demonstrates this professional level of expertise with industry tools as well as showcases a unique voice in digital media. The thesis, created specifically based on the candidate's project proposal, is expected to meet standards demonstrating technical mastery, depth of knowledge, aesthetics, and problem solving. At the same time, the work will represent the candidate's individual perspective, style, and philosophy. The thesis project should show a thoughtful and deep understanding of the student's theme that is compelling and persuasive, technically complete, and executed to a high degree.

The MFA in Digital Arts thesis production includes project planning, schedules and timelines, and design documentation as appropriate.

Candidates are required to participate a thesis defense and produce a written paper. The final work and all documents will be archived in the DigiPen Library and gallery.

Written Component

The thesis will have a written component. Its contents will be similar to the information presented in the thesis defense, but it may include more detail and will be formatted as an academic paper.

Thesis Defense

The MFA in Digital Arts candidate thesis defense will be scheduled with the thesis committee once a student has successfully completed (or has in progress) the required coursework (minimum 60 approved credits) and the thesis project is nearing completion.

Students will be expected to deliver a verbal and visual presentation of the thesis work including motivation, research, design, execution, results, and conclusions. The thesis will be presented to the committee and invited public. A question and answer session will follow the presentation, during which the candidate will be required to defend their work.

MFA in Digital Arts Curriculum

Listed below are all the graduate-level courses currently offered at DigiPen and appropriate to the MFA in Digital Arts degree program. Courses designated with an “R” are required in the program, and those designated with an “E” are appropriate as electives within the program.

Graduate-Level Courses for the MFA in Digital Arts Degree Program

Course	Course Title	R/E	Credits
ART 5001	Art Research Methodology	R	3
PRJ 6001	Digital Arts Survey and Analysis	R	3
CG 5001	3D Concepts and Production	R	3
CG 5000	Digital Painting: Composition and Color	R	3
PRJ 7000	Thesis Pre-Production	R	3
PRJ 6002	Digital Art Production Process	R	3
CG 5002	Organic and Hard Surface Modeling	R	3
PRJ 7001	Thesis I	R	6
PRJ 7002	Thesis II	R	6
ART 5402	Advanced Figure Drawing	E	3
ART 5410	Gesture Drawing	E	3
FLM 5100	Introduction to Storyboarding	E	3
ART 5260	Plein Air Painting	E	3
ART 6500	Conceptual Design and Illustration	E	3
ART 5540	Character Design	E	3
ART 5470	Animal Anatomy and Design	E	3
ART 5150	Survey of Sequential Art	E	3
CG 6250	Hard Surface Modeling and Texturing	E	3
CG 6450	Texturing for 3D	E	3
CG 6550	Lighting and Rendering	E	3
CG 5301	Procedural Modeling and Visual Effects	E	3
CG 5302	Procedural Art and Simulations	E	3
CG 6101	Character Creation I	E	3
CG 6102	Character Creation II	E	3
CG 6103	Character Creation III	E	3
CG 6201	Environment Creation I	E	3
CG 6202	Environment Creation II	E	3
CG 6203	Environment Creation III	E	3
PRJ 510	Team Project	E	3
INT 590	Master’s Internship I	E	3
INT 591	Master’s Internship II	E	3
CSX 510	Digital Arts Scripting	E	3
MCM 600	Masters Continuous Matriculation	E	1
ART 599	Special Topics	E	3
CG 599	Special Topics	E	3
	Total Credits		**60**

Course Sequencing

Full-Time

Semester 1

Course Code	Title	Credits
CG 5001	3D Digital Art	3
PRJ 6001	Digital Arts Survey and Analysis	3
CG 5000	2D Digital Art	3
	Studio Art Elective	3
	Sub-Total Credits	**12**

Semester 2

Course Code	Title	Credits
ART 5001	Art Research and Methodology	3

CG 5002	Organic and Hard Surface Modeling	3
	Visual Development Elective	3
	Core Elective	3
	Sub-Total Credits	**12**

Semester 3: Summer

Course Code	Title	Credits
PRJ 6002	Digital Art Production Process	3
PRJ 7000	Thesis Pre-Production	3
	Specialization Elective or Core Elective	3
	Sub-Total Credits	**9**

Semester 4

Course Code	Title	Credits
PRJ 7001	Thesis I	6
	Open Elective	3
	Specialization Elective or Core Elective	3
	Studio Art Elective	3
	Sub-Total Credits	**15**

Semester 5

Course Code	Title	Credits
PRJ 7002	Thesis II	6
	Core Elective	3
	Specialization Elective or Core Elective	3
	Sub-Total Credits	**12**

Part-Time

Semester 1

Course Code	Title	Credits
CG 5001	3D Digital Art	3
PRJ 6001	Digital Arts Survey and Analysis	3
CG 5000	2D Digital Art	3
	Sub-Total Credits	**9**

Semester 2

Course Code	Title	Credits
CG 5002	Organic and Hard Surface Modeling	3
	Visual Development Elective	3
	Sub-Total Credits	**6**

Semester 3

Course Code	Title	Credits
PRJ 6002	Digital Art Production Process	3
	Sub-Total Credits	**3**

Semester 4

Course Code	Title	Credits
	Studio Art Elective	3
	Core Elective	3
	Sub-Total Credits	**6**

Semester 5

Course Code	Title	Credits
ART 5001	Art Research and Methodology	3
	Core Elective	3
	Sub-Total Credits	**6**

Semester 6

Course Code	Title	Credits
PRJ 7000	Thesis Pre-Production	3
	Specialization Elective or Core Elective	3
	Sub-Total Credits	**6**

Semester 7

Course Code	Title	Credits
PRJ 7001	Thesis I	6
	Specialization Elective or Core Elective	3
	Sub-Total Credits	**9**

Semester 8

Course Code	Title	Credits
	Open Elective	3
	Specialization Elective or Core Elective	3
	Sub-Total Credits	**6**

Semester 9

Course Code	Title	Credits
PRJ 7002	Thesis II	6
	Sub-Total Credits	**6**

Semester 10

Course Code	Title	Credits
	Studio Art Elective	3
	Sub-Total Credits	**3**

Note:

Electives must be selected from courses offered at DigiPen and numbered 500 or higher. Courses may have prerequisites that should be taken into consideration by the student and discussed with the student's advisor.

English, Minor

Degree / Minor Requirements

To earn an English minor at DigiPen, a student must complete a block of 18 credits satisfying the following:

Course Code	Title	Credits
	Any English Courses Except ENG 450	
	At Least 1 English Course Numbered 300 or Higher	
	Total Credits	**18**

Game Design, Bachelor of Arts

Program Overview

The field of interactive design has moved from an era where designers were self-taught and learned on the job, to one where even entry-level designers are expected to have proven design skills, as well as knowledge of technology, information processing, and psychology. Interactive designers must continually place themselves in the minds of their users and players, shaping every action and response, carefully teaching them what they need to know, and skillfully blending the interactive, spatial, narrative, visual, and aural aspects of an experience. Whether working on digital tools and simulations, on traditional or digital games, or even on physical installations, this degree program prepares graduates to be interactive designers, capable of working in large teams, communicating and collaborating with other designers, artists, and engineers, able to create any kind of interactive experience.

Graduates will be well-versed in both interactive design and game design theory, including user interface design, usability, spatial design, system design, and behavior design. Graduates will have extensive experience testing, iterating, and polishing both digital and non-digital designs through the completion of both individual and team projects. Graduates will also be familiar with the basics of psychology, programming, computer graphics, sound design, and writing.

Student Learning Outcomes & Educational Objectives

Upon completion of the Bachelor of Arts in Game Design degree program, students are expected to achieve the following outcomes:

- Achieve basic proficiency in the concepts and skills of multiple design specialties: System Design, Level Design, Technical Design, Narrative Design, User Experience Design, and User Research
- Apply knowledge of design principles and human psychology to create engaging experiences
- Analyze and understand the needs of a given audience to create an engaging experience
- Analyze problems and constraints to identify and define appropriate design solutions that demonstrate a balanced approach to the needs of different audiences
- Demonstrate the ability to rapidly implement and test design prototypes as part of the iterative design process
- Understand deeply how to measure and iteratively improve experiences for multiple audiences
- Understand the professional, social, and ethical responsibilities of design
- Ability to communicate effectively and persuasively with a range of audiences
- Function effectively on multidisciplinary teams to create engaging experiences
- Use current techniques, skills, and tools to create effective designs
- Recognize the need for ongoing professional development and demonstrate ability to research new topics and approaches
- Demonstrate fluency in at least two different design specialties: System Design, Level Design, Technical Design, Narrative Design, User Experience Design, or User Research

Career Outlook

Graduates of this degree program will be prepared to enter the software industry as entry-level User Experience Designers and the game industry as entry-level Game Designers. Possible entry-level position titles include User Interface Designer,
User Experience Designer, Usability Researcher, Installation Designer, Game Scripter, Technical Designer, System Designer, Level Designer, Content Designer, Encounter Designer, Quest Designer, and Game Designer. This degree program also includes secondary training that can contribute directly to a graduate obtaining positions with titles such as Producer, Program Manager, Writer, Technical Writer, and Editor. After many years in the industry, graduates may obtain titles such as Lead Designer, User Experience Architect, Creative Director, and Director.

Degree / Minor Requirements

Number of Credits and GPA

The Bachelor of Arts in Game Design requires completion of at least 129 semester credits with a cumulative GPA of 2.0 or better. The program spans eight semesters of 15 weeks each, or four academic years

Communications

The following course is required:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
	Sub-Total Credits	**3**

Computer Graphics

Course Code	Title	Credits
	6 Credits of Computer Graphics or Digital Arts Courses	6
	Sub-Total Credits	**6**

Computer Science

The following course is required:

Course Code	Title	Credits
	CS 116 or CS 120	4
	7 Credits of Computer Science Courses Numbered 150 or Higher	7
	Sub-Total Credits	**11**

Design

Course Code	Title	Credits
DES 100	Introduction to Design Process	4
DES 101	Principles of Interactive Design	4
	5 Courses from DES 220, DES 230, DES 240, DES 250, DES 260, or DES 270	15
	2 Courses from DES 320, DES 330, DES 340, DES 350, DES 360, or DES 370	6
	2 Courses from DES 420, DES 430, DES 440, DES 450, DES 460, or DES 470	6
	12 Credits of Design Courses Numbered 200 or Higher	12
	Sub-Total Credits	**47**

English

Course Code	Title	Credits
	6 Credits of English Courses	6
	Sub-Total Credits	**6**

General Studies

The following courses are required:

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
COL 235	College Success for Designers	1
	Sub-Total Credits	**2**

Humanities and Social Sciences

Course Code	Title	Credits
	3 Credits of Humanities or Social Sciences Courses	3
	Sub-Total Credits	**3**

Mathematics

The following course is required:

Course Code	Title	Credits
MAT 105	Introductory Probability and Statistics	3
	Sub-Total Credits	**3**

Music

The following course is required:

Course Code	Title	Credits
MUS 115	Fundamentals of Music and Sound Design	3
	Sub-Total Credits	**3**

Projects

The following course is required:

Course Code	Title	Credits
	GAM 120 or GAM 150	3
	24 Credits of Game Project or Computer Science Project Courses Numbered 200 or Higher	24
	Sub-Total Credits	**27**

Psychology

The following courses are required:

Course Code	Title	Credits
PSY 101	Introduction to Psychology	3
PSY 211	Cognitive Psychology	3
	3 Credits of Psychology Courses	3
	Sub-Total Credits	**9**

Science

Course Code	Title	Credits
	3 Credits of Physics or Natural Science Courses	3
	Sub-Total Credits	**3**

Specialization Support

Course Code	Title	Credits
	6 Credits of Mathematics, English, Film, Computer Graphics or Digital Arts, Computer Science, Art, Psychology, or Management Courses	6
	Sub-Total Credits	**6**

Note on General Education Courses

The following courses satisfy the general education requirement for the Bachelor of Arts in Game Design:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
MAT 105	Introductory Probability and Statistics	3
MUS 115	Fundamentals of Music and Sound Design	3
PSY 101	Introduction to Psychology	3
PSY 211	Cognitive Psychology	3
	3 Credits of Psychology Courses	3
	3 Credits of Science Courses	3
	6 Credits of English Courses	6
	3 Credits of Humanities or Social Sciences Courses	3
	Sub-Total Credits	**30**

	Total Credits	**129**

Course Sequencing

Fall Start

Semester 1: Fall

Course Code	Title	Credits
DES 100	Introduction to Design Process	4
DES 101	Principles of Interactive Design	4
PSY 101	Introduction to Psychology	3
CS 116	Introduction to Programming	4
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**16**

CS 116: Other courses may fulfill this requirement. See degree program requirements for details

Semester 2: Spring

Course Code	Title	Credits
GAM 120	Introduction to Digital Production	3
	DES 220, DES 240, or DES 260	3
DES 250	Technical Design I	3

ENG 116	Fundamentals of Storytelling	3
MAT 105	Introductory Probability and Statistics	3
	Sub-Total Credits	**15**

GAM 120, ENG 116: Other courses may fulfill this requirement. See degree program requirements for details

Semester 3: Fall

Course Code	Title	Credits
CG 102	2D Raster Graphics for Designers	3
CS 165	Programming Foundations	4
DES 270	User Research I	3
DES 230	Narrative Design I	3
GAM 200	Project II	4
	Sub-Total Credits	**17**

CG 102, GAM 200, CS 165: Other courses may fulfill this requirement. See degree program requirements for details

Semester 4: Spring

Course Code	Title	Credits
COL 235	College Success for Designers	1
	DES 220, DES 240, or DES 260	3
	DES 220, DES 240, or DES 260	3
GAM 250	Project II	4
PSY 211	Cognitive Psychology	3
	3 Credit Computer Science Course Numbered 150 or Higher	3
	Sub-Total Credits	**17**

GAM 250: Other courses may fulfill this requirement. See degree program requirements for details

Semester 5: Fall

Course Code	Title	Credits
GAM 300	Project III	4
	Design Specialization Course	3
	3 Credit Design Course Numbered 200 or Higher	3
MUS 115	Fundamentals of Music and Sound Design	3
CG 125	Introduction to 3D Production for Designers	3
	Sub-Total Credits	**16**

GAM 300, CG 125: Other courses may fulfill this requirement. See degree program requirements for details

Semester 6: Spring

Course Code	Title	Credits
GAM 350	Project III	4
	Design Specialization Course	3
	3 Credit Design Course Numbered 200 or Higher	3
	3 Credits of Mathematics, English, Film, Computer Graphics or Digital Arts, Computer Science, Art, Psychology, or Management Courses	3
PHY 115	Introduction to Applied Math and Physics	3
	Sub-Total Credits	**16**

GAM 350, PHY 115: Other courses may fulfill this requirement. See degree program requirements for details

Semester 7: Fall

Course Code	Title	Credits
	GAM 375 or GAM 400	4
	Design Capstone	3
	3 Credit Design Course Numbered 200 or Higher	3
	3 Credits of Psychology Courses	3
COM 150	Introduction to Communication	3
	Sub-Total Credits	**16**

GAM 375 or GAM 400: Other courses may fulfill this requirement. See degree program requirements for details

Semester 8: Spring

Course Code	Title	Credits
	GAM 400 or GAM 450	4
	Design Capstone	3
	3 Credit English Course	3
	3 Credits of Humanities or Social Sciences Courses	3
	3 Credits of Mathematics, English, Film, Computer Graphics or Digital	3

	Arts, Computer Science, Art, Psychology, or Management Courses	
	Sub-Total Credits	**16**

GAM 400 or GAM 450: Other courses may fulfill this requirement. See degree program requirements for details

Spring Start

Semester 1: Spring

Course Code	Title	Credits
DES 100	Introduction to Design Process	4
DES 101	Principles of Interactive Design	4
ENG 116	Fundamentals of Storytelling	3
CS 116	Introduction to Programming	4
COL 101	College Life and Academic Skills	1
	Sub-Total Credits	**16**

ENG 116, CS 116: Other courses may fulfill this requirement. See degree program requirements for details

Semester 2: Summer

Course Code	Title	Credits
GAM 120	Introduction to Digital Production	3
	DES 220, DES 240, or DES 260	3
DES 250	Technical Design I	3
PSY 101	Introduction to Psychology	3
	Sub-Total Credits	**12**

GAM 120: Other courses may fulfill this requirement. See degree program requirements for details

Semester 3: Fall

Course Code	Title	Credits
CG 102	2D Raster Graphics for Designers	3
CS 165	Programming Foundations	4
DES 270	User Research I	3
DES 230	Narrative Design I	3
GAM 205	Project II for Designers	4
	Sub-Total Credits	**17**

CG 102, GAM 205, CS 165: Other courses may fulfill this requirement. See degree program requirements for details

Semester 4: Spring

Course Code	Title	Credits
COL 235	College Success for Designers	1
	DES 220, DES 240, or DES 260	3
	DES 220, DES 240, or DES 260	3
GAM 255	Project II for Designers	4
MAT 105	Introductory Probability and Statistics	3
PSY 211	Cognitive Psychology	3
	Sub-Total Credits	**17**

GAM 205: Other courses may fulfill this requirement. See degree program requirements for details

Semester 5: Fall

Course Code	Title	Credits
GAM 300	Project III	4
	Design Specialization Course	3
	3 Credit Design Course Numbered 200 or Higher	3
MUS 115	Fundamentals of Music and Sound Design	3
CG 125	Introduction to 3D Production for Designers	3
	3 Credit Computer Science Course Numbered 150 or Higher	3
	Sub-Total Credits	**19**

GAM 300, CG 125: Other courses may fulfill this requirement. See degree program requirements for details

Semester 6: Spring

Course Code	Title	Credits
GAM 350	Project III	4
	Design Specialization Course	3
	3 Credit Design Course Numbered 200 or Higher	3
	3 Credits of Mathematics, English, Film, Computer Graphics or Digital Arts, Computer Science, Art, Psychology, or Management Courses	3
PHY 115	Introduction to Applied Math and Physics	3
	Sub-Total Credits	**16**

GAM 350, PHY 115: Other courses may fulfill this requirement. See degree program requirements for details

Semester 7: Fall

Course Code	Title	Credits
	GAM 375 or GAM 400	4
	Design Capstone	3
	3 Credit Design Course Numbered 200 or Higher	3
	3 Credits of Psychology Courses	3
COM 150	Introduction to Communication	3
	Sub-Total Credits	**16**

GAM 375, GAM 400: Other courses may fulfill this requirement. See degree program requirements for details

Semester 8: Spring

Course Code	Title	Credits
	GAM 400, GAM 450, or Other Course	4
	Design Capstone	3
	3 Credit English Course	3
	3 Credits of Humanities or Social Sciences Courses	3
	3 Credits of Mathematics, English, Film, Computer Graphics or Digital Arts, Computer Science, Art, Psychology, or Management Courses	3
	Sub-Total Credits	**16**

GAM 400 or GAM 450: Other courses may fulfill this requirement. See degree program requirements for details

Game Design, Minor

Degree / Minor Requirements

To earn a Game Design minor at DigiPen, students must complete 15 credits of any DES courses.

Course Code	Title	Credits
	15 Credits of DES Courses	15
	Total Credits	**15**

Math, Minor

Degree / Minor Requirements

To earn a math minor at DigiPen, a student must complete a block of 27 credits satisfying the following:

Course Code	Title	Credits
	Courses from MAT 140 or Higher	21
	6 Credits of Mathematics Courses Numbered 300 or Higher	6
	Total Credits	**27**

Music, Minor

(Not available to BSCS DA or BA MSD students)

Degree / Minor Requirements

To earn a music minor at DigiPen, a student must complete a block of 18 credits including the following:

Course Code	Title	Credits
MUS 120	Music Theory and Musicianship I	2
MUS 120L	Music Theory and Musicianship I Lab	1
MUS 121	Music Theory and Musicianship II	2
MUS 121L	Music Theory and Musicianship II Lab	1
	6 Credits of Any Music Course Numbered 200 or Higher	6
	6 Credits from MAT 120 or Any Music Course	6
	Total Credits	**18**

Music and Sound Design, Bachelor of Arts

Program Overview

The Bachelor of Arts in Music and Sound Design offers practical training in the design, production, and implementation of sound and music for video games and other digital media. Students gain experience as composer/sound designers on multidisciplinary game and film teams, where they learn modern digital audio workflows and

game development practices. They compose, perform, record, and produce music and sound recordings, and design and implement soundtracks and soundscapes for interactive and linear media. Our graduates are effective collaborators and trusted colleagues and leaders in their profession.

Student Learning Outcomes & Educational Objectives

Graduates of the BAMSD program are fully prepared to function as effective members of a game software development team, demonstrating interdisciplinary collaboration skills and an understanding of component disciplines. The are proficient composers and sound designers who can implement adaptive audio in a game engine and demonstrate effective techniques for mixing linear and adaptive audio. They are able to apply principles of copyright law and ethical business practices to the management of a career as an audio professional, and demonstrate effective communication, presentation, technical, and analytical skills.

Career Outlook

Graduates of this program are prepared for the following entry and intermediate level positions: Sound Designer, Technical Sound Designer, Music Composer, Music Designer, Music Arranger, Recording Engineer, Audio Production Editor, Dialog Editor, Music Supervisor, Music Editor, Copyist/Engraver, Music Librarian, Music Supervisor, Music Performer, and Music Teacher.

Degree / Minor Requirements

Number of Credits and GPA

The Bachelor of Arts in Music and Sound Design requires completion of 140 semester credits with a cumulative GPA of 2.0 or better. The program usually spans eight semesters of 15 weeks each, or four academic years.

Computer Science

The following courses are required:

Course Code	Title	Credits
CS 116	Introduction to Programming	4
CS 174	Audio Scripting	3
	Sub-Total Credits	**7**

Film

The following courses are required:

Course Code	Title	Credits
FLM 115	History of Film and Animation	3
FLM 201	Cinematography	3
	Sub-Total Credits	**6**

General Studies

The following courses are required:

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
COL 499	Career Search Preparation: Materials, Logistics, and Communication	1
	Sub-Total Credits	**2**

Humanities and Social Sciences

The following courses are required:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
LAW 115	Introduction to Intellectual Property and Contracts	3
	3 Credits of English Courses	3
	9 Credits of Humanities and Social Sciences Courses	9
	Sub-Total Credits	**21**

Mathematics

The following course is required:

Course Code	Title	Credits
MAT 120	Mathematics of Music and Sound	3
	Sub-Total Credits	**3**

Music

The following courses are required:

Course Code	Title	Credits
MUS 110	Private Lessons I - Instrumental or Vocal	1
MUS 111	Private Lessons II - Instrumental or Vocal	1
MUS 112	Dragon Chorus	1
MUS 113	Vocal Ensemble	1
MUS 120	Music Theory and Musicianship I	2
MUS 120L	Music Theory and Musicianship I Lab	1
MUS 121	Music Theory and Musicianship II	2

MUS 121L	Music Theory and Musicianship II Lab	1
MUS 150	Sound Design Project I	2
MUS 150L	Sound Design Project I Lab	2
MUS 151	Sound Design Project II	2
MUS 151L	Sound Design Project II Lab	2
MUS 161	History of Western Music	3
MUS 171	History of Video Game Music	3
MUS 210	Private Lessons III - Instrumental or Vocal	1
MUS 211	Private Lessons IV - Instrumental or Vocal	1
MUS 212	Vocal Ensemble	1
MUS 213	Vocal Ensemble	1
MUS 220	Music Theory and Musicianship III	2
MUS 220L	Music Theory and Musicianship III Lab	1
MUS 221	Music Theory and Musicianship IV	2
MUS 221L	Music Theory and Musicianship IV Lab	1
MUS 230	Composition I	2
MUS 231	Composition II	2
MUS 240	Sound Design Collaborative Project I	1
MUS 242	Sound Design Collaborative Project II	2
MUS 250	Sound Design Project III	1
MUS 250L	Sound Design Project III Lab	2
MUS 251	Sound Design Project IV	1
MUS 251L	Sound Design Project IV Lab	2
MUS 310	Private Lessons V - Instrumental or Vocal	1
MUS 311	Private Lessons VI - Instrumental or Vocal	1
MUS 320	Conducting and Instrumentation	2
MUS 321	Introduction to Orchestration	3
MUS 322	Adaptive Music for Video Games	3
MUS 330	Advanced Composition I	3
MUS 331	Advanced Composition II	3
MUS 340	Sound Design Collaborative Project III	1
MUS 342	Sound Design Collaborative Project IV	2
MUS 350	Sound Design Project V	1
MUS 350L	Sound Design Project V Lab	2
MUS 351	Sound Design Project VI	1
MUS 351L	Sound Design Project VI Lab	2
	MUS 410 or MUS 415	1
	MUS 411 or MUS 416	1
	6 Credits from MUS 390, MUS 450, MUS 450L, MUS 451, MUS 451L, or MUS 490	6
	9 Credits of Other Music Courses	9
	Sub-Total Credits	**89**

Open Electives

Sufficient additional credits to meet the required 140 semester credits for the program.

	Sub-Total Credits	**6**

Physics

The following courses are required:

Course Code	Title	Credits
PHY 115	Introduction to Applied Math and Physics	3
PHY 116	Physics of Music and Sound	3
	Sub-Total Credits	**6**

Note on General Education Courses

The following courses satisfy the general education requirement for the Bachelor of Arts in Music and Sound Design:

Course Code	Title	Credits
COM 150	Introduction to Communication	3
ENG 110	Composition	3
FLM 115	History of Film and Animation	3
LAW 115	Introduction to Intellectual Property and Contracts	3
PHY 115	Introduction to Applied Math and Physics	3
PHY 116	Physics of Music and Sound	3
	9 Credits of Humanities and Social Sciences Courses	9
	3 Credit English Course	3
	Sub-Total Credits	**30**

	Total Credits	**140**

Course Sequencing

Semester 1

Course Code	Title	Credits
COL 101	College Life and Academic Skills	1
ENG 110	Composition	3
FLM 115	History of Film and Animation	3
MAT 120	Mathematics of Music and Sound	3
MUS 110	Private Lessons I - Instrumental or Vocal	1
MUS 112	Dragon Chorus	1
MUS 120	Music Theory and Musicianship I	2
MUS 120L	Music Theory and Musicianship I Lab	1
MUS 150	Sound Design Project I	2
MUS 150L	Sound Design Project I Lab	2
	Sub-Total Credits	**19**

Semester 2

Course Code	Title	Credits
COM 150	Introduction to Communication	3
FLM 201	Cinematography	3
MUS 111	Private Lessons II - Instrumental or Vocal	1
MUS 113	Vocal Ensemble	1
MUS 121	Music Theory and Musicianship II	2
MUS 121L	Music Theory and Musicianship II Lab	1
MUS 151	Sound Design Project II	2
MUS 151L	Sound Design Project II Lab	2
PHY 115	Introduction to Applied Math and Physics	3
	Sub-Total Credits	**18**

Semester 3

Course Code	Title	Credits
CS 116	Introduction to Programming	4
MUS 161	History of Western Music	3
MUS 210	Private Lessons III - Instrumental or Vocal	1
MUS 212	Vocal Ensemble	1
MUS 220	Music Theory and Musicianship III	2
MUS 220L	Music Theory and Musicianship III Lab	1
MUS 230	Composition I	2
MUS 240	Sound Design Collaborative Project I	1
MUS 250	Sound Design Project III	1
MUS 250L	Sound Design Project III Lab	2
	Sub-Total Credits	**18**

Semester 4

Course Code	Title	Credits
CS 174	Audio Scripting	3
MUS 171	History of Video Game Music	3
MUS 211	Private Lessons IV - Instrumental or Vocal	1
MUS 213	Vocal Ensemble	1
MUS 221	Music Theory and Musicianship IV	2
MUS 221L	Music Theory and Musicianship IV Lab	1
MUS 231	Composition II	2
MUS 242	Sound Design Collaborative Project II	2
MUS 251	Sound Design Project IV	1
MUS 251L	Sound Design Project IV Lab	2
	Sub-Total Credits	**18**

Semester 5

Course Code	Title	Credits
COL 499	Career Search Preparation: Materials, Logistics, and Communication	1
	3 Credit English Course	3
MUS 310	Private Lessons V - Instrumental or Vocal	1
MUS 320	Conducting and Instrumentation	2
MUS 330	Advanced Composition I	3
MUS 340	Sound Design Collaborative Project III	1
MUS 350	Sound Design Project V	1

MUS 350L	Sound Design Project V Lab	2
PHY 116	Physics of Music and Sound	3
	Sub-Total Credits	**17**

Semester 6

Course Code	Title	Credits
	3 Credit HSS Elective	3
MUS 311	Private Lessons VI - Instrumental or Vocal	1
MUS 321	Introduction to Orchestration	3
MUS 322	Adaptive Music for Video Games	3
MUS 331	Advanced Composition II	3
MUS 342	Sound Design Collaborative Project IV	2
MUS 351	Sound Design Project VI	1
MUS 351L	Sound Design Project VI Lab	2
	Sub-Total Credits	**18**

Semester 7

Course Code	Title	Credits
	Open Elective	3
	3 Credit HSS Elective	3
	3 Credit HSS Elective	3
MUS 410	Private Lessons VII - Instrumental or Vocal	1
MUS 450	Sound Design Project VII	1
MUS 450L	Sound Design Project VII Lab	2
	3 Credit Music Elective	3
	Sub-Total Credits	**16**

Semester 8

Course Code	Title	Credits
	Open Elective	3
LAW 115	Introduction to Intellectual Property and Contracts	3
MUS 411	Private Lessons VIII - Instrumental or Vocal	1
MUS 451	Sound Design Project VIII	1
MUS 451L	Sound Design Project VIII Lab	2
	3 Credit Music Elective	3
	3 Credit Music Elective	3
	Sub-Total Credits	**16**

Physics, Minor

Degree / Minor Requirements

To earn a physics minor at DigiPen, a student must complete a block of 18 credits satisfying the following:

Course Code	Title	Credits
	CS 550 or Physics Courses Numbered 200 or Higher	18
	Total Credits	**18**

Psychology, Minor

Degree / Minor Requirements

To earn a psychology minor at DigiPen, a student must complete a block of 15 credits from the following PSY courses:

Course Code	Title	Credits
PSY 101	Introduction to Psychology	3
	PSY 207 or PSY 209	3
	Any Psychology Courses Numbered 200 or Higher	9
	Total Credits	**15**

Courses

Animation

ANI 101

This course introduces the principles of animation through a variety of animation techniques. Topics include motion research and analysis, effective timing, spacing, volume control, stagecraft, and choreography. Weekly screenings of classic animation are held, followed by in-class critiques.

Credits	**3**
Prerequisites	**None**

ANI 151

This course explores concepts and techniques of traditional animation. Motion and posing is explored through character development, which includes the expression of personality, mood, thought, and attitude. Emphasis is placed on the refinement of drawings, subtlety of movement, and creativity.

Credits	**3**
Prerequisites	**ANI 101**

ANI 300

This course explores 3D character animation techniques of performance, physicality, and weight using basic rigs provided by the instructor. Special attention is given to thumbnailing key poses, video research, and stagecraft.

Credits	**3**
Prerequisites	**ANI 151**, **CG 275**

ANI 330

This course explores 3D animation through advanced physicality, weight, and performances. Special attention is placed on visual storytelling, action, choreography, and scope. Topics include planning, pose studies, video research, motion analysis, camera placement, advanced keyframing techniques, and pantomime. Additional topics may include motion capture and rendering.

Credits	**3**
Prerequisites	**ANI 300**

ANI 350

This 3D animation course explores acting through the medium of the human voice, including narration, expressive reading, diction, lip-synchronization techniques, and vocal refinement.

Credits	**3**
Prerequisites	**ANI 300**

ANI 399

The content of this course may change each time it's offered. It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

ANI 400

This course is a culmination of the student's ability to use animation as a storytelling medium. It also provides an opportunity for the student to demonstrate his or her personal artistic growth. Each student works to complete a short piece of cinematic animation. Working independently or in small groups with the instructor's approval, students may use either 2D or 3D tools.

Credits	**3**
Prerequisites	**FLM 275 or MUS 115**, **ANI 350**, **ART 401**

ANI 450

This course requires students to further extend their portfolio work, principally polishing and refining elements that will align them well for current industry needs. With a generous selection of assignment opportunities to be explored, students will gain advanced instruction on more focused acting, physicality and creature animation. This course will provide students with an ideal opportunity to improve an area of their portfolio work that will better represent animated body mechanics and acting skills.

Credits	**3**
Prerequisites	**ANI 350**, **CG 300**, **PRJ 350**

ANI 1000

This course introduces the principles of animation and how movement is conveyed through timing, spacing, and drawing. Emphasis is placed on bringing sequential images to life through motion analysis. Topics include animation theories, research, planning, keyframing, and in-betweening.

Credits	**3**
Prerequisites	**None**

ANI 2000

This course focuses on the principles of animation in 3D workspace. Emphasis is placed on 3D animation workflow and rigging concepts. Topics include research and planning, keyframe management, animation principles, rigging fundamentals, and viewport rendering.

Credits	**3**
Prerequisites	**ANI 1000**

ANI 2002

This course focuses on 3D character animation and character rigging, with an emphasis on body mechanics. Additional emphasis is placed on bringing a 3D character to life through dynamic motion. Topics include planning, motion analysis, animation passes, splining, constraints and parenting, inverse and forward kinematics, animation tools, and skeletal rigging.

Credits	**3**
Prerequisites	**ANI 2000**

ANI 3301

This course focuses on rigging bipedal characters for animation. Topics include basic rig creation, joint formation, inverse kinematic/forward kinematic switches, skinning, joint constraints, spine rig, rig attributes, and rig controllers.

Credits	**3**
Prerequisites	**ANI 2002 OR CG 2002**

ANI 3302

This course builds on the principles of rigging a bipedal character and further explores multi-limbed creatures. Topics include stretchy inverse kinematics, facial rigging, and complex rig controllers.

Credits	**3**
Prerequisites	**ANI 3301**

ANI 3303

This course explores advanced rigging techniques. Topics include scripting secondary behaviors, scripting rigging production tools, and designing versatile character rigs.

Credits	**3**
Prerequisites	**ANI 3302**

ANI 3501

This course explores 3D animation through physicality, weight, and performance. Emphasis is placed on animating bipedal characters and pantomime acting. Topics include planning for animation, advanced splining techniques, basic body mechanics, motion analysis, video reference, and stagecraft.

Credits	**3**
Prerequisites	**ANI 2002**

ANI 3502

This course explores 3D animation through advanced physicality, weight, and performance. Special attention is placed on visual storytelling, action, choreography, and scope. Topics include planning, pose studies, video research, motion analysis, camera placement, advanced keyframing techniques, and acting for action sequences.

Credits	**3**
Prerequisites	**ANI 3501**

ANI 3503

This course explores acting in 3D animation. Performance techniques are addressed, ranging from stylized facial expressions to nuanced physicality. Topics include narration, pantomime, monologue, dialogue, diction, and lip synchronization.

Credits	**3**
Prerequisites	**ANI 3502**

Art

ART 101

This course explores the nature of drawing as a language skill and the use of drawing by production artists and animators. Topics include applied drawing goals, critical thinking skills, and best practices in drawing practice, drill, and play. Design principles, reference research, and the design process are applied to a series of practical problems. This course also explores drawing materials, drawing strategy, drawing sequence, and linear drawing methodology, practice, and theory.

Credits	**3**
Prerequisites	**None**

Notes
Credit may be received for ART 101 or ART 102, but not for both.

ART 102

Students will be introduced to simple drawing techniques, constructed linear perspective, visual design methodology, and drawing vocabulary through lectures, studio assignments, and simple projects.

Credits	**3**
Prerequisites	**None**

Notes
Credit may be received for ART 101 or ART 102, but not for both.

ART 105

This course provides a basic working knowledge of the processes used in making art. Topics include the origins and techniques involving drawing, tone, color, composition and artistic process as well as a simple overview of art history.

Credits	**3**
Prerequisites	**None**

ART 110

Beginning with the physiology of perception, this course explores the simple building blocks of visual communications and how the viewer understands and responds to shapes, symbols, and images. The foundational skills of design process and problem-solving methodologies are explored to develop the student's visual problem-solving skills.

Credits	**3**
Prerequisites	**None**

ART 111

This course builds a foundation in ceramic arts. It provides the opportunity to learn basic techniques of the ceramic process, which include hand-building techniques, wheel throwing, and glazing.

Credits	**3**
Prerequisites	**None**

ART 115

This course provides an overview of art history from Paleolithic times through the modern day. The course examines classical art materials and methods and traces the technological advances of society and art. It considers the interplay between art and technology and how they have historically impacted society.

Credits	**3**
Prerequisites	**None**

ART 120

This course introduces construction drawing as a method to create the sensation of depth and volume in art. Particular attention is paid to planar- and value-based strategies to add a convincing sense of legitimacy and consistency in 2D art and animation.

Credits	**3**
Prerequisites	**ART 101**

ART 125

This course introduces various methods for activating the picture plane, manipulating the viewer's visual experience, and visually communicating complex ideas and moods. These methods are reinforced through the study and application of light, darkness, value, color-harmony systems, and compositional strategies.

Credits	**3**
Prerequisites	**None**

Notes

Credit may be received for either ART 125 or ART 126, not both.

ART 126

This course continues to build on students' abilities to draw by exploring techniques for producing finished drawings, quick explanatory sketches, and rapid visualizations. Methods for use of tone and color to convey mood and atmosphere are covered. Basic graphic design and typography are taught with particular emphasis on interface design. Classical forms of compositional organization, such as symmetry, asymmetry, golden mean, and figure ground relationships are also explored.

Credits	**3**
Prerequisites	**ART 101 or ART 102**

Notes

Credit may be received for ART 125 or ART 126, but not for both.

ART 130

This course builds upon the theories, techniques, and practices introduced in ART 125 while introducing the concepts of analysis and extrapolation in the creation of a visual reference library for implementation in subsequent coursework.

Credits	**3**
Prerequisites	**ART 125**

ART 150

This course explores the skeletal and muscular structures of the human body. Skeletal and muscular forms are identified from both live models and anatomical references. Topics include terminology, structural arrangement, and kinetic function. The course gives special emphasis to adapting this knowledge to the needs of artists and animators.

Credits	**3**
Prerequisites	**ART 101**
Corequisites	**ART 151**

ART 151

This course introduces the challenges of drawing the human form and applying lessons in anatomy to the figure. Life drawing for animation is examined in this course by studying the skeletal structure, muscle form, gesture, and emotion when drawing a live model.

Credits	**3**
Prerequisites	**ART 101**

ART 200

This course introduces the major skeletal and muscular structures of animals. Topics include terminology, structural arrangement, and kinetic function. The course also considers standard locomotion cycles and the relationship between humans and various animals. This course gives special emphasis to adapting this knowledge to the needs of artists and animators.

Credits	**3**
Prerequisites	**ART 150**

ART 201

This course emphasizes drawing the human form from a structural perspective. Strategies for visualizing anatomy are explored. These include identifying bony landmarks and constructing the form through primitives and value. Additional topics include drawing the clothed figure and foreshortening.

Credits	**3**
Prerequisites	**ART 125, ART 151**

ART 210

This introduction to art provides students with a better understanding of artistic influences on modern culture. Along with the history of art, students study the meanings, purposes, styles, elements, and principles of art and the various media used to create works of art. In helping students gain basic awareness, knowledge, and enjoyment of the visual arts, the course provides the groundwork for further personal study in the arts. In turn, this influences the development of their creativity.

Credits	**2**
Prerequisites	**None**

ART 222

This course builds upon hand-building techniques learned in Introduction to Ceramics (ART 111). Surface texture techniques and basic mold-making will be explored, all while working in the certainty of 3D.

Credits	**3**
Prerequisites	**ART 111**

ART 225

This course introduces students to the principles of 3D design using both traditional and digital tools. Students become acquainted with additive, subtractive, and cast sculpture. They consider the basic concepts of architectural space, interior design, landscape design, surface interplay with light, lofted forms, and skinning systems. Students use modern polymer clays and build an animation maquette.

Credits	**3**
Prerequisites	**ART 201**

ART 228

This course introduces the challenges of sculpting the human figure from life. It utilizes traditional techniques to build an armature and complete a sculpture in clay for the purpose of exploring the human form in 3D space. Emphasis is placed on gesture, proportion, and anatomy, as well as on developing a strong sense of form and volume.

Credits	**3**
Prerequisites	**ART 151**, **ART 150**

ART 230

This course explores ideas and various techniques related to painting. The use of color and the representation of space is emphasized. Students explore masterworks, studio painting, and painting en plein air. Technical and social problems related to painting are explored using portraiture, still life, and environment/ landscape. A portable field easel and appropriate painting supplies will be required. The course will culminate in a group show of student projects.

Credits	**3**
Prerequisites	**ART 125**

ART 234

In this course, students will learn to explore and to exploit the power of sequential images as a medium to craft stories beyond storyboarding, photography, and film. Through the formats of the graphic novel and related forms, students will tackle problems of character and events; their solutions will be limited only by their imaginations. The course will begin with a historical overview of sequential art and will then examine storytelling through pictures, focusing on clarity and emotional impact. Students will examine contemporary styles and conventions and will be required to draw from previous art experiences, while honing their skills in drawing, perspective, design, color, typography, writing, editing, and acting. Demonstrations of multimedia techniques and computer technology relative to this field will also be introduced.

Credits	**3**
Prerequisites	**ART 125**, **ART 151**

ART 240

This course will introduce fundamental visual design concepts, including composition and use of white space, identification and use of classic type families, creation and use of layout and grid construction, use of visual hierarchies, and effective usability strategies.

Credits	**3**
Prerequisites	**ART 125** or **ART 126**

ART 251

This course introduces the traditions of character design and the basic structural strategies for creating animated characters. The course explores simplification gradients relative to human, animal, and inanimate object-based characters. It also considers issues of costume, personality, and story interaction. The course emphasizes professional applications, techniques, and standards of quality. The work completed in this course may serve as pre-production design for PRJ 300, PRJ 350, or ANI 300.

Credits	**3**
Prerequisites	**ART 201, CG 201**

ART 300

This course explores the animation pre-production skills of background and layout art. It emphasizes professional applications, techniques, and standards of quality. Students are guided through classical depth cue and perspective systems as they apply this knowledge to the creation of animation backgrounds and layouts. Additionally, students explore means of using drawing to create elements such as camera lens illusions, architectural space, theatrical sets, game visual design, matte painting, and surface texture.

Credits	**3**
Prerequisites	**ART 201, CG 201**

ART 301

This course builds upon all art disciplines, primarily 2D related skills, to prepare students for positions requiring the creation of concept art. Emphasis is placed on the importance of balancing speed of content generation with quality, as this is one of the most pressing and relevant challenges in this field. With this mindset, students are challenged to evaluate and understand new forms of character and environment generation. Both theory and technique are heavily stressed during this course, with the final tangible outcome being multiple portfolio pieces that demonstrate the individual's abilities and unique style/interests.

Credits	**3**
Prerequisites	**ART 251, CG 201, CG 275**

ART 310

This course introduces students to the aesthetics and principles of 2D (floor plans and elevations) and 3D environment design. A survey of architectural styles from throughout the world is blended with concepts, such as emotion, mood, lighting, shadows, aesthetics, and more. The course emphasizes learning the architectural vocabulary as well as the aesthetics of environmental and game-level design. Texturing, spatial design, negative space, dramatic lighting, and other concepts that affect not only the psychology of level design but also gameplay principles are covered. Students participate in numerous field trips to local examples of architecture in order to gain an understanding of architectural spaces and the field's vocabulary.

Credits	**3**
Prerequisites	**None**

ART 350

This course explores the animation pre-production skills of storyboard art. Emphasis is placed on storytelling and cinematography to create both production and presentation storyboards. Drawing is applied as a means to create story-flow, character development, mood, time, and place.

Credits	**3**
Prerequisites	**ART 201, ENG 116, FLM 115**

ART 360

This class builds on the foundational skills and knowledge from Architectural Spaces, Design, and Lighting I (ART 310), covering more period styles. Additionally, students have opportunities to do more hands-on creation of art, models, and textures relative to various periods. Students participate in a variety of field trips in order to research and analyze architectural styles and then to build them in the computer lab.

Credits	**3**
Prerequisites	**ART 310**

ART 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

ART 401

This course explores the animation pre-production skills of conceptual illustration and visual development. Students apply their knowledge of drawing, storytelling, and composition to create speculative drawings for animation. They review compositional systems, design process, and illustration techniques. Additionally, students explore means of using drawing to visually explore story and character ideas from both existing and original story materials. They also consider adaptation, stylization, and visual variety. The course emphasizes professional applications, techniques, and standards of quality. The work completed in this course serves as pre-production design for PRJ 300, PRJ 350, or ANI 300.

Credits	**3**
Prerequisites	**ART 300**

ART 501

This advanced course integrates with the student's study of sculpture to express human anatomy artistically in two dimensions. Students will explore: kinetics by engaging in gesture drawing; use of line and value; figure in environment; figurative composition and sequential composition. Students will be encouraged to explore creativity and personal voice in their work.

Credits	**3**
Prerequisites	**None**

ART 503

This course focuses on drawing the figure in an interpretive manner, focusing on the action and intent of the pose. Whereas in traditional life drawing the focus is on reproduction of the figure, in this course the pose is the starting point rather than the end point. All aspects of drawing, including line, form, silhouette, details, lighting, and most importantly line of action are directed to the purpose of visually communicating action and intent. Particular attention will be paid to distribution of weight, depth, balance, tension, rhythm, and flow.

Credits	**3**
Prerequisites	**None**

ART 504

This course explores the animation pre-production skills of storyboard art. Students learn to leverage their knowledge of storytelling and cinematography to create production and presentation storyboards. They also explore means of using drawing to create story flow, character development, mood, time and place. The course emphasizes professional applications, techniques, and standards of quality.

Credits	**3**
Prerequisites	**None**

ART 511

This course develops observational skills through painting from life and accurately rendering the human figure. Students are encouraged to explore their own themes and refine their individual voices and style.

Credits	**3**
Prerequisites	**ART 501**

ART 512

Students focus on exploring and understanding lighting, atmospherics and space in the natural environment in both traditional and digital 2D media. Drawing, composition, color, orchestration, palette limitation, paint manipulation and edges, digital simulation, and color reproduction are examined. Studies taken from nature using critical on-location observation become the raw material leading to the creation of large studio canvases and/or digital environments.

Credits	**3**
Prerequisites	**None**

ART 520

This course explores visual development and concept art and their use in a production environment. Story, composition, character, and environment are considered in both existing and original visual story materials. A variety of illustration techniques are utilized in the design process.

Credits	**3**
Prerequisites	**CG 525**

ART 522

This course focuses on the traditions of character design and the basic structural strategies for creating animation characters. Students explore simplification gradients relative to human, animal and inanimate object-based characters. They consider issues of costume, personality, props, story interaction, and-albeit obliquely-environments. The course emphasizes professional applications, techniques and standards of quality.

Credits	**3**
Prerequisites	**ART 501**

ART 528

This class builds on ART 501 by challenging students to apply their anatomical knowledge while sculpting from the live human figure. Using traditional techniques to build an armature and complete a sculpture in clay, students enhance their understanding of the human form in 3D space. Concepts of design, expression and personal voice will be stressed.

Credits	**3**
Prerequisites	**ART 501**

ART 550

This course explores the skeletal and muscular structures of the human body and techniques for rendering their visual form. Topics include identification of bones and muscles, anatomical terminology, concepts of body mechanics, kinetic function, and facial expressions.

Credits	**3**
Prerequisites	**None**

Notes

Credit may be received for BIOX 500 or ART 550, but not for both.

ART 555

This course involves the creation of a scale model of the internal human form starting with the skeletal system. Topics include identification of anatomical structures, skeletal proportion, the complex curves created by bones and muscles, and the spatial relationships between the individual forms.

Credits	**3**
Prerequisites	**ART 550**

ART 560

This course examines the major skeletal and muscular structures of various animals and techniques for rendering their visual form. Structural comparisons between humans and other animals are considered and a systematic approach for the informed design of imaginary creatures is addressed.

Credits	**3**
Prerequisites	**ART 550**

Notes

Credit may be received for BIOX 550 or ART 560, but not for both.

ART 599

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

ART 701

This course explores the relationship between art, science, and technology through examples of artwork spanning from ancient cultures to the modern digital age. The course solves problems of design through observations and practices based on the interdisciplinary approaches of artists of the past, using anatomy, perspective, iconography, and other disciplines.

Credits	**3**
Prerequisites	**None**

ART 702

This course facilitates the research, development, and refinement of a proposal for an MFA thesis topic. It covers production planning, including timeline, scoping, and milestones. The culmination is a proposal for the mid-point thesis review. Approval of the thesis proposal by the faculty thesis committee is a requirement for passing this course.

Credits	**3**
Prerequisites	**ART 701**

ART 703

In this course, work is initiated on an approved thesis project under the guidance of the faculty thesis advisor.

Credits	**6**
Prerequisites	ART 702 **Permission of instructor required.**

ART 704

In this course, work continues on an approved thesis project under the guidance of the faculty thesis advisor.

Credits	**6**
Prerequisites	ART 703

ART 1000

This course introduces a canon of Western and Non-Western Art. Emphasis is on applied critical thinking in the analysis of art in social, historic, and artistic contexts. Additional topics include applied research techniques and presentation skills.

Credits	**3**
Prerequisites	**None**

ART 1100

This course explores the fundamentals of drawing with line. Emphasis is placed on applied drawing goals and critical thinking skills. Topics include design elements, principles, processes, and basic research strategies.

Credits	**3**
Prerequisites	**None**

ART 1120

This course expands on applied drawing goals, practices and design. Emphasis is placed on the concepts of construction drawing, analysis, and extrapolation for the design and creation of representational imagery derived from imagination. Additional topics include composition, value, and perspective.

Credits	**3**
Prerequisites	ART 1100

ART 1200

This course explores the fundamentals of observation and rendering of light and color. Emphasis is placed on practical techniques of observational drawing and painting. Topics include sight-measuring, composing the picture plane, depicting light and shadow, and working with color in terms of value, intensity, and hue.

Credits	**3**
Prerequisites	**None**

ART 1220

This course expands on the principles of color theory, visual art techniques, and studio practices. An emphasis is placed on the concepts of analysis and extrapolation for the design and creation of representational imagery derived from imagination. Additional topics include multiple light sources, surface materials and textures, and relative color systems

Credits	**3**
Prerequisites	ART 1200

ART 2050

This course introduces concepts, methods, and techniques of visual development. Emphasis is placed on creating story-driven concepts involving characters, objects, and environments. Additional topics include research techniques, design pipelines, and master study.

Credits	**3**
Prerequisites	ART 2110, CG 2000

ART 2110

This course introduces concepts, methods, and techniques of figure drawing. Emphasis is on the structure and kinetic function of the skeletal and muscular systems. Additional topics include gesture, shape, rhythm, and proportions.

Credits	**3**
Prerequisites	ART 1100

ART 2150

This course introduces sequential art through the graphic novel and related media. Storytelling is expressed through pictures and words, focusing on clarity and emotional impact. Topics include contemporary styles and conventions, draftsmanship, design, color, typography, writing, editing, and acting.

Credits	**3**
Prerequisites	**ART 1120, ART 2110 This course is equivalent to ART 234**

ART 2200

This course focuses on the materials, methods, and techniques of painting from observation. Classical approaches to painting will be explored, including brushwork, composition, and advanced color schemes and lighting strategies. Additional topics include critical analysis, theoretical frameworks, and conceptual explorations.

Credits	**3**
Prerequisites	**ART 1220, ART 130**

Notes
This course is equivalent to ART 230

ART 2360

This course introduces students to the principles of miniature 3D environment design with traditional media. Theatrical sets, architectural simulations, and themed entertainment design are considered as are the principles of set dressing, scenic painting, sculpting, and 3D printing.

Credits	**3**
Prerequisites	**CG 2001**

ART 2410

This course focuses on methods of studying and drawing the poses of a live model. Emphasis is placed on discovering and extracting narrative essence in order to develop story. Additional topics include line, form and silhouette, weight, depth, balance, tension, rhythm and flow.

Credits	**3**
Prerequisites	**ART 2110, ART 151**

ART 3050

This course explores elements of self-representation and portfolio development. Emphasis is placed on visual continuity in the creation of a portfolio, demo reel, promotional items, and projects. Additional topics include networking and interview strategies, contract negotiations, business documents, freelancing, and trade show exhibitions.

Credits	**3**
Prerequisites	**ANI 3301 or ANI 3501 or CG 3101 or CG 3201**

ART 3402

This advanced figure drawing course explores the intricacies of human anatomy, form, and proportion. Through direct observation, this course teaches accurate representation of the human figure. Additional topics include strategies for mark-making and refined shading for both nude and clothed figures, advanced techniques for capturing gestures and movement, as well as how to extrapolate from observation and memory to create imaginative poses. Additional emphasis is placed on ways life drawing can be applied to character design for the entertainment industry.

Credits	**3**
Prerequisites	**ART 2110 or ART 151**

ART 3470

This course explores the major skeletal and muscular structures of vertebrate animals focusing on various expressions of tetrapod structure, myology and movement, and the environmental factors that give rise to their development. Emphasis is placed on the application of this information to infuse creative work with visual authenticity. Additionally, this course explores various approaches to mark marking and surface textures, reinforcing a sound visual approach while honing 2D digital art skills in industry-standard software.

Credits	**3**
Prerequisites	**ART 2110 or ART 150 and ART 151, CG 2000**

ART 5001

This interdisciplinary course blends art research, illustration, and interpretive writing. The course uses art history to explore various modes and conceptual models of art-making and expression. Design challenges are used to explore formal choices and their relationship to content. Additionally, this course teaches explanatory and analytical writing skills for communicating about art.

Credits	**3**
Prerequisites	**None**

ART 5150

This course introduces sequential art through the graphic novel and related media. Storytelling is expressed through pictures and words, focusing on clarity and emotional impact. Topics include contemporary styles and conventions, draftsmanship, design, color, typography, writing, editing, and acting.

Credits	**3**
Prerequisites	**None**

ART 5260

In this course students explore the fundamentals of landscape painting. Observation is the foundation for students to use painting media to explore topics including drawing, painting, composition, value, lighting, atmospheric perspective, and working in color.

Credits	**3**
Prerequisites	**None**

ART 5360

This course introduces students to the principles of miniature 3D environment design with traditional media. Theatrical sets, architectural simulations, and themed entertainment design are considered as are the principles of set dressing, scenic painting, sculpting, and 3D printing.

Credits	**3**
Prerequisites	**CG 501, or CG 5001**

ART 5402

This advanced figure drawing course explores the intricacies of human anatomy, form, and proportion. Through direct observation, this course teaches accurate representation of the human figure. Additional topics include strategies for mark-making and refined shading for both nude and clothed figures, advanced techniques for capturing gestures and movement, as well as how to extrapolate from observation and memory to create imaginative poses. Additional emphasis is placed on ways life drawing can be applied to character design for the entertainment industry.

Credits	**3**
Prerequisites	**None**

ART 5410

This course focuses on methods of studying and drawing the poses of a live model. Emphasis is placed on discovering and extracting narrative essence in order to develop story. Additional topics include line, form and silhouette; weight, depth, balance, tension, rhythm and flow.

Credits	**3**
Prerequisites	**None**

Notes

This course is equivalent to ART 503

ART 5470

This course explores the major skeletal and muscular structures of vertebrate animals focusing on various expressions of tetrapod structure, myology and movement, and the environmental factors that give rise to their development. Emphasis is placed on the application of this information to infuse creative work with visual authenticity. Additionally, this course explores various approaches to mark marking and surface textures, reinforcing a sound visual approach while honing 2D digital art skills in industry-standard software.

Credits	**3**
Prerequisites	**ART 5402**

ART 5540

This course teaches the fundamentals of character design for the game and animation industries. Emphasis is placed on visual design decisions, and their relationship to expressing character and narrative. Additional topics include industry practices and presentation.

Credits	**3**
Prerequisites	**ART 5402, CG 5000**

ART 6500

This advanced course explores visual development and concept art and their use in a production environment. Topics include: adaptation, storytelling, exploring visual possibilities, and satisfying stylistic goals to define the look and feel for a product. The course emphasizes professional applications, techniques, and standards of quality.

Credits	**3**
Prerequisites	**CG 5000**

MCM 600

Maintaining continuous matriculation is a requirement for graduate students. Students who have completed most course requirements but are finishing their thesis or are satisfying incomplete grades must register to maintain continuous matriculation. This credit may not be applied toward degree completion requirements.

Credits	**1**
Prerequisites	**None**

College Success

COL 101

This course assists students in developing the classroom and communication skills necessary to succeed in both educational and professional situations.

Credits	**1**
Prerequisites	**None**

COL 230

This course introduces industry research, professional expectations, and requisite levels of proficiency. The course helps identify strengths, skills, interests, and areas for growth and requires the creation of an academic plan.

Credits	**1**
Prerequisites	**PRJ 201 or PRJ 202**

COL 235

This course introduces industry research and professional expectations, and helps identify student strengths, skills, and interests. This course also requires the creation of an academic plan focusing on skill development.

Credits	**1**
Prerequisites	**GAM 200, GAM 205, or CSP 200**

COL 499

This is a capstone course for students to prepare their application materials and learn how to effectively search for an entry-level job in their field. The goal of the course is for each student to have a polished resume, cover letter, business card, and online/web presence by the end of the semester, as well as a search strategy for seeking employment.

Credits	**1**
Prerequisites	**None**

Communications

COM 150

This course provides an introduction to the principles and processes of individual and small group communication. Topics include verbal and nonverbal communication, effective interpersonal communication, best practices for creating and improving team dynamics, and public speaking.

Credits	**3**
Prerequisites	**None**

COM 250

This course prepares students for the communication challenges that await them in the professional world. Topics covered may include professional networking strategies, career search materials, self-presentation and interview skills, and effective communication across all levels and functions of the workplace.

Credits	**3**
Prerequisites	**None**

COM 351

This course introduces the theory and vocabulary of gender studies and relevant socio-political movements such as the women's movement. It investigates how ideas about sex and gender and identities as men, women, and sexual beings are influenced by and manifested in communication behaviors and in the communication channels and messages that permeate society. Key themes include: the fluidity of gender, the gendered body, gender in verbal and non-verbal communication in professional and non-professional settings, and gender-based power and authority.

Credits	**3**
Prerequisites	**COM 150**

COM 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

Computer Graphics

CG 102

This course introduces the software and basic interface customization options and strategies in 2D raster graphics. Interface organization strategies, system components, bit depth, resolution, memory management, and output strategies are covered. The course also explores techniques and critical thinking skills for digital painting.

Credits	**3**
Prerequisites	**None**

CG 125

This course introduces game designers to the 3D production process. The course begins with the basics of interface organization strategies, equipment options, and production elements. The class also introduces techniques for texture mapping, modeling, rigging, lighting, cameras, and animation.

Credits	**3**
Prerequisites	**None**

CG 130

This course introduces students to the basic theories and techniques of 3D computer animation. The curriculum emphasizes standard 3D modeling techniques, including polygonal and spline modeling, texture map creation and application, keyframing, and animating through forward kinematics and inverse kinematics.

Credits	**3**
Prerequisites	**None**

CG 300

This course introduces students to the principles of 3D environment design. Theatrical sets, architectural simulations, and level design are considered. In order to provide students with a broader skill set, this course also presents the mechanics of how to use other 3D animation software, with an emphasis on the unique strengths of the package. Students explore the comparative strengths of different software packages and the impact that this has on workflow. The course emphasizes critical thinking skills and strategies for tool selection.

Credits	**3**
Prerequisites	**CG 275**

CG 305

This course introduces an array of digital modeling, sculpting, and painting techniques with a set of industry-standard 3D and 2D tools. After a series of exercises, students learn the tools and work flow of digital sculpting and enhance their knowledge of anatomy. As part of this class, students create a highly finished 3D character that is fully designed, modeled, posed, sculpted, and textured. They also demonstrate knowledge of environmental sculpting.

Credits	**3**
Prerequisites	**CG 275**

CG 399

The content of this course may change each time it is offered. n It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

CG 501

Students are introduced to the computer graphics production pipeline with emphasis on latest industry practices and techniques. Project work includes planning, tasking, concept art, production, and output. Professional portfolio practices are emphasized.

Credits	**3**
Prerequisites	**None**

CG 521

This course explores a variety of modeling techniques for both man-made and organic surfaces.

Credits	**3**
Prerequisites	CG 501

CG 570

This course examines the methods required to combine 2D and 3D art for cinematic, computer animation and gaming environments. Issues of scale, perspective, palette and color matching, atmospheric perspective and lighting, parallax, horizon and eye level are addressed in a series of exercises designed to create convincing interaction of 2D and 3D art in interior scenes, cityscapes, and landscapes in a variety of media.

Credits	**3**
Prerequisites	CG 525

CG 599

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

CG 605

This course introduces an array of digital modeling, sculpting, and painting techniques for use with a set of 3D and 2D tools. Sculpting, modeling, posing, anatomy, texturing, and workflow are practiced.

Credits	**3**
Prerequisites	CG 521

CG 615

This course focuses on how to generate efficient and accurate texture maps. The course also explores techniques for generating landscape-, architectural-, objects-, and character-based textures.

Credits	**3**
Prerequisites	CG 501, CG 525

CG 661

This course focuses on the building techniques and theories behind 3D biped or quadruped character creation, including anatomy, design, lighting, shading, and rendering.

Credits	**3**
Prerequisites	ART 522, CG 605

CG 675

This course focuses on how to effectively rig characters for games or films. Multiple rigging methods are explored such as: building a hierarchy of joints, creating flexible controls for characters, forward kinematics and inverse kinematics.

Credits	**3**
Prerequisites	CG 501

CG 676

This course focuses on advanced rigging techniques. Topics may include biped rigs, quadruped rigs, and scripting.

Credits	**3**
Prerequisites	CG 675

CG 2000

This course introduces 2D digital art. Topics include digital drawing, painting, material studies, conceptualization, and illustration.

Credits	**3**
Prerequisites	ART 1120, ART 1220

CG 2001

This course introduces 3D digital art with a focus in modeling and texturing. Topics include modeling, UV unwrapping, texturing, materials, lighting, and rendering.

Credits	**3**
Prerequisites	ART 1220

CG 2002

This course introduces 3D digital art pipelines and software workflows with a focus in digital sculpting and modeling, texture painting, and managing digital art assets through various software. Topics include digital sculpting techniques, modeling, UV unwrapping, 3D texturing and painting, materials, and digital art pipeline.

Credits	**3**
Prerequisites	CG 2001

CG 3101

This course introduces digital sculpting for character creation, including building techniques and pipeline processes. Topics include digital sculpting, poly painting, texturing, lighting, rendering, and level of details.

Credits	**3**
Prerequisites	CG 2002

CG 3102

This course focuses on advanced digital sculpting for character creation, including high level details and pipeline processes. Topics include digital painting, lighting, and rendering of hair and clothing.

Credits	**3**
Prerequisites	CG 3101

CG 3103

This course focuses on character creation and implementation in real-time rendering engines. Topics include re-topologizing, hair optimization, texturing, lighting, and rendering.

Credits	**3**
Prerequisites	CG 3102

CG 3104

This course focuses on advanced 3D digital character creation and implementation for portfolio presentation. An emphasis is placed on refining a digital character model based on personalized critique of individual work, applying advanced 3D character creation techniques and methodologies, and documenting the production process.

Credits	**3**
Prerequisites	CG 3103

CG 3201

This course focuses on the design of 3D environments and techniques for environment creation. Topics include environment layout, 3D modeling, lighting, texturing, materials, and rendering.

Credits	**3**
Prerequisites	CG 2002

CG 3202

This course focuses on advanced techniques and theories of environmental hard surface modeling for 3D real-time engines. Topics include environment research and design, 3D modeling, lighting, texturing, material creation, and rendering.

Credits	**3**
Prerequisites	CG 3201

CG 3203

This course focuses on advanced techniques and theories of organic environment creation for 3D real-time engines. Topics include environment research and design, 3D modeling, digital sculpting, lighting, texturing, material creation, and rendering.

Credits	**3**
Prerequisites	CG 3202

CG 3204

This course focuses on advanced 3D digital environment creation and implementation for portfolio presentation. An emphasis is placed on refining a digital environment based on personalized critique of individual work, applying advanced 3D environment creation techniques and methodologies, and documenting the production process.

Credits	**3**
Prerequisites	CG 3203

CG 3250

This course focuses on modeling hard surface objects with complex textures and materials. Emphasis is placed on lighting and rendering to showcase the models. Topics include theory and practice of modeling hard surfaces.

Credits	**3**
Prerequisites	CG 2002

CG 3301

This course focuses on procedural art workflows to create complex visual effects and simulations with an emphasis on project-based learning. Topics include modeling, lighting, rendering, shaders for procedural models, programming and scripting languages, dynamic simulations, and particle systems.

Credits	**3**
Prerequisites	**None**

CG 3302

This course is an exploration of connected procedural art workflows to create visual effects and simulations with an emphasis on project-based learning. Topics may include: procedural workflows, rigid body destruction, pyrotechnic effects, procedural modeling, fracturing techniques, lighting, realtime rendering, vellum, game engine integration, programming languages.

Credits	**3**
Prerequisites	CG 3301

CG 3450

This course focuses on the texturing of 3D models. Emphasis is placed on generating efficient textures and materials, practicing texturing techniques, and exploring texturing workflows. Topics include UV unwrapping, textures and materials creation, digital painting, lighting, and rendering.

Credits	**3**
Prerequisites	CG 2002

CG 3550

This course focuses on the fundamentals of lighting a scene. Emphasis is placed on understanding common digital lighting approaches and creating a mood through lighting. Topics include materials, shaders, rendering, scene composition, and effective use of light and shadow.

Credits	**3**
Prerequisites	CG 2002

CG 5000

This course introduces 2D digital art. Topics include digital drawing, painting, material studies, conceptualization, and illustration.

Credits	**3**
Prerequisites	**None**

CG 5001

This course introduces 3D digital art with an emphasis on modeling, texturing, and best production practice. Topics include modeling, UV unwrapping, texturing, materials, lighting, and rendering.

Credits	**3**
Prerequisites	**None**

CG 5002

This course explores a variety of techniques and workflows for both organic and hard surface modeling. Topics include digital sculpting techniques, modeling, UV unwrapping, 3D texturing and painting, materials, workflows, lighting, and rendering.

Credits	**3**
Prerequisites	CG 5001

CG 5301

This course focuses on procedural art workflows to create complex visual effects and simulations with an emphasis on project-based learning. Topics include modeling, lighting, rendering, shaders for procedural models, programming and scripting languages, dynamic simulations, and particle systems.

Credits	**3**
Prerequisites	**None**

CG 5302

This course is an exploration of connected procedural art workflows to create visual effects and simulations with an emphasis on project-based learning. Topics may include: procedural workflows, rigid body destruction, pyrotechnic effects, procedural modeling, fracturing techniques, lighting, realtime rendering, vellum, game engine integration, programming languages.

Credits	**3**
Prerequisites	**CG 5301**

CG 6101

This course introduces digital sculpting for character creation, including building techniques and pipeline processes. Topics include digital sculpting, poly painting, texturing, lighting, rendering, and level of details.

Credits	**3**
Prerequisites	**CG 5002**

CG 6102

This course focuses on advanced digital sculpting for character creation, including high level details and pipeline processes. Topics include digital painting, lighting, and rendering of hair and clothing.

Credits	**3**
Prerequisites	**CG 6101**

CG 6103

This course focuses on character creation and implementation in real-time rendering engines. Topics include re-topologizing, hair optimization, texturing, lighting, and rendering.

Credits	**3**
Prerequisites	**CG 6102**

CG 6201

This course focuses on the design of 3D environments and techniques for environment creation. Topics include environment layout, 3D modeling, lighting, texturing, materials, and rendering.

Credits	**3**
Prerequisites	**CG 5002**

CG 6202

This course focuses on advanced techniques and theories of environmental hard surface modeling for 3D real-time engines. Topics include environment research and design, 3D modeling, lighting, texturing, material creation, and rendering.

Credits	**3**
Prerequisites	**CG 6201**

CG 6203

This course focuses on advanced techniques and theories of organic environment creation for 3D real-time engines. Topics include environment research and design, 3D modeling, digital sculpting, lighting, texturing, material creation, and rendering.

Credits	**3**
Prerequisites	**CG 6202**

CG 6250

This course focuses on modeling hard surface objects with complex textures and materials. Emphasis is placed on lighting and rendering to showcase the models. Topics include theory and practice of modeling hard surfaces.

Credits	**3**
Prerequisites	**CG 5002**

CG 6450

This course focuses on the texturing of 3D models. Emphasis is placed on generating efficient textures and materials, practicing texturing techniques, and exploring texturing workflows. Topics include UV unwrapping, textures and materials creation, digital painting, lighting, and rendering.

Credits	**3**
Prerequisites	**CG 5002**

CG 6550

This course focuses on the fundamentals of lighting a scene. Emphasis is placed on understanding common digital lighting approaches and creating a mood through lighting. Topics include materials, shaders, rendering, scene composition, and effective use of light and shadow.

Credits	**3**
Prerequisites	**CG 5002**

Computer Science

CS 100

This course provides a detailed examination of the fundamental elements on which computers are based. Topics include number systems and arithmetic computations, electricity and basic circuits, logic circuits, memory, computer architectures, serial communication, pulse width modulation and operating systems. Additionally, operational code and assembly languages are discussed and then implemented on a hardware platform.

Credits	**4**
Prerequisites	**None**

CS 115

This course introduces programming environments to students who are not experienced programmers. This course covers simple logic, programming flow, and the use of variables. It introduces students to the history of programming and the basic vocabulary of the programming industry. The course culminates in a series of hands-on exercises using this knowledge to solve problems. At his or her discretion, the instructor may cover special topics in programming or scripting.

Credits	**3**
Prerequisites	**None**

Notes

Credit may be received for CS 115 or for CS 120, but not for both.

Credit may be received for CS 115 or for CS 116, but not for both.

CS 116

This course introduces students not enrolled in a computer science program to the fundamentals of programming through usage of the C# language. Topics include the basics of computer hardware, simple logic flow, variables, expressions, conditionals, loops, functions, arrays and object-oriented programming.

Credits	**4**
Prerequisites	**None**

Notes

Credit may be received for CS 115 or for CS 116, but not for both.

CS 120

This course covers the fundamentals of programming in C. It focuses on developing a deep understanding of the structured programming concepts and practices. Topics include variables, data types, functions, control structures, pointers, strings, arrays, and dynamic allocation principles.

Credits	**4**
Prerequisites	**None**

Notes

Credit may be received for CS 115 or for CS 120, but not for both.

CS 165

This course expands on basic programming skills through an exploration of object-oriented programming techniques. Topics may include classes, inheritance, interfaces, polymorphism, and data structures.

Credits	**4**
Prerequisites	**CS 116**

Notes

Credit may be received for only one of: CS 165, CS 170.

CS 170

This course covers the fundamentals of programming in C++. It focuses on developing an understanding of object-oriented concepts and principles. Topics include classes, operator overloading, function and class templates, composition, inheritance, and introduction to standard libraries such as containers and algorithms.

Credits	**4**
Prerequisites	CS 120

Notes

Credit may be received for only one of: CS 165, CS 170

CS 174

This course covers concepts and implementation strategies for using a high-level scripting language to achieve complex audio behavior in game development. Topics include principles of analog and digital audio, psychoacoustics, and programming.

Credits	**3**
Prerequisites	CS 116 **or** CS 120**, and** MUS 150L

CS 176

This course explores programming concepts for game designers in the context of developing video games. Topics covered include architecture patterns, advanced character controllers, cameras, and custom systems designed for versatility and scalability. Additional topics may include game testing automation, and networking.

Credits	**3**
Prerequisites	CS 165 **or** CS 170

CS 180

This course focusses on dynamic trio of virtualization, concurrency, and persistence that powers modern computing systems. The course is designed to explore various operating system related topics like, virtualization, processes, threads, context switching, synchronization, scheduling, and virtual memory management algorithms. Additionally, it also focuses on the intricacies of file systems & disk management, unravelling the computer system's inner workings.

Credits	**3**
Prerequisites	CS 100, CS 170

CS 185

This course introduces the C++ language with particular emphasis on its object-oriented features. Topics covered include differences between scripting languages and C++, data types, namespaces, classes, inheritance, polymorphism, templates, and fundamental STL components.

Credits	**3**
Prerequisites	CS 176

Notes

Credit may be received for CS 170 or CS 185, but not for both.

CS 200

This course presents fundamental mathematical elements, data structures, and algorithms useful for animating and viewing 2D primitives. The course aims to fulfill two objectives. The first objective is to provide students with a sufficient mathematical and algorithmic background to design and implement 2D graphics applications. The second objective is to prepare students with the knowledge required for writing 3D graphics applications. The first half of the course deals with scan-conversion algorithms for rasterizing 2D primitives such as lines, circles, ellipses, triangles, and arbitrary polygons. The second half of the course is concerned with the viewing and animation of these 2D primitives. The course covers topics such as interpolation techniques, transformations, culling, clipping, animation techniques, and the 2D viewing pipeline.

Credits	**3**
Prerequisites	CS 170, MAT 140

CS 205

This course focusses on the local and global impact of computers, the Internet and related computer technology on society. Emphasis is placed on the social forces underlying the rapid and widespread adoption of computer technology. Topics covered include personal privacy, intellectual property, legislative and constitutional issues, changing labor force composition, and professional ethics.

Credits	**3**
Prerequisites	ENG 110 **OR** ENG 116**, and** CS 280

CS 211

This course provides a broad overview of database systems. It presents the fundamentals, practices, and applications of computer databases. Topics include database architectures, data modeling, design schemes, transaction processing, and database implementation. Additional topics may include emerging technologies in the field.

Credits	**3**
Prerequisites	CS 170

CS 212

This course offers an in-depth exploration of database management system concepts and their practical applications. It focuses on designing enterprise-scale data systems by introducing core system design principles aligned with software engineering while exploring industry best practices. Additionally, the course delves into specialized database technologies and their specific use cases, highlighting the role of databases in supporting complex, real-world applications and large-scale data environments.

Credits	**3**
Prerequisites	CS 211, **CS 311**

CS 225

This course covers advanced features and techniques in C and C++. It focuses on developing an understanding of interaction and communication between classes and objects. Topics include bit manipulations, advanced memory management, advanced function and class templates, inheritance, design patterns, and STL containers and algorithms.

Credits	**3**
Prerequisites	CS 170

CS 230

This course explores the architecture and implementation techniques of game engines. Through hands-on projects, a basic game engine will be created and expanded, applying fundamental programming principles.

Credits	**3**
Prerequisites	CS 120
Corequisites	CS 170

CS 231

This course focuses on designing and creating game engine architecture with a small group of engineers. Over the course of a semester, a simple real-time game will be created to prove and test the architecture.

Credits	**3**
Prerequisites	CS 170, CS 230

CS 232

This course covers basic concepts of data processing, cleaning, summarization, and visualization. The course introduces exploratory data analysis, and basic concepts of probability and statistics as they are applied in data analysis.

Credits	**3**
Prerequisites	CS 116 **or** CS 120, **and** MAT 100 **or** MAT 106 **or** MAT 140

CS 245

This course examines the principles and practicalities of digital sound synthesis. Topics include the digital representation of sound, real–time generation and manipulation of audio data, MIDI, wavetable synthesis, additive synthesis, sound modeling, and FM synthesis.

Credits	**3**
Prerequisites	CS 170, MAT 100 **or** MAT 106 **or** MAT 140

CS 246

This course covers the basic building blocks that go into making a sound engine. Topics may include: audio file formats, sound card architecture, low level sound APIs, high level sound APIs, streaming audio, mixing, digital filters and effects, 3D audio, audio spectra and the Fast Fourier Transform.

Credits	**3**
Prerequisites	CS 245

CS 250

This course examines the mathematical elements and algorithms used in the design and development of real-time 3D computer graphics applications, such as games, cockpit simulators, and architectural walk-throughs. 3D computer graphics involve drawing pictures of 3D objects, usually on a 2D screen. This process of generating a 2D image of a 3D graphics application can be described as a series of distinct operations performed on a set of input data. Each operation generates results for the successive one. This process is called the graphics rendering pipeline, and it is the core of real-time computer graphics. The graphics pipeline can be conceptualized as consisting of three stages: application, transformation, and rasterization. The course begins by introducing the 3D graphics pipeline. The application stage is examined from the viewpoint of the representation, modeling, and animation of 3D objects. Topics include user interaction, camera animation techniques, simulation of dynamic objects, and collision detection techniques. Next, the course examines the process of mapping 3D graphic objects from model-space to viewport coordinates. The transformation stage implements this process. Finally, the conversion of a geometric primitive in viewport coordinates into a 2D image is studied. The rasterization stage implements this final process.

Credits	**3**
Prerequisites	CS 200

CS 251

This course provides a high-level overview of 3D computer graphics. It is intended for game designers and artists to enable them to understand the fundamental components of graphics engines and their applications in real-time simulation and video game software. Course topics include graphics pipeline architecture, 3D transformation operations, viewing and projection, lighting and shading models, surface detail techniques, shadow algorithms, hidden object culling and removal techniques, 3D object modeling, and animation and physically-based motion control. The popular graphics programming languages (GDI plus, OpenGL, DirectX) and shader programming are also discussed in the course.

Credits	**3**
Prerequisites	CS 170

CS 260

This course provides an introduction to hierarchical network communication within a distributed computing environment. The curriculum encompasses network technologies, architecture, and protocols, with a particular focus on the TCP/IP stack.

Credits	**3**
Prerequisites	CS 180, CS 225

CS 261

This course builds upon the foundational knowledge acquired in the introductory network course, deepening the understanding of network communication within distributed computing environments. Topics covered include data replication and systemic scalability, distributed-system languages and platforms, and operational practices for service development and real-time data replication.

Credits	**3**
Prerequisites	CS 260

CS 271

This course covers fundamental machine learning algorithms and their implementation using supervised learning techniques. Topics include classification and regression supervised learning algorithms.

Credits	**3**
Prerequisites	CS 225, CS 230 **or** CS 235, MAT 150 **or** MAT 180

CS 272

This course covers the fundamentals of goal-directed machine learning using reinforcement learning principles. Decision-making frameworks based on exploitation and exploration are covered. The course also covers single- and multiple-state space approximations using regular- and linear-function approximation techniques.

Credits	**3**
Prerequisites	CS 271, MAT 258

CS 280

This course introduces classical abstract data types (ADT) in computer science. ADTs provide the hierarchical views of data organization used in programming. Among the topics covered are the algorithms and primitives of the data structures for arrays, linked lists, stacks, queues, trees, hash tables, and graphs. n In addition, the course provides an introduction to algorithm complexity and notation.

Credits	**3**
Prerequisites	CS 225

CS 300

This course introduces students to algorithms that are essential to creating photorealistic images in interactive simulations. n Topics covered include an overview of modern GPU (graphics processor unit) architecture and the common graphics APIs used, including OpenGL and DirectX. Rendering techniques covered include texturing, illumination models, transparency, shading algorithms, mapping techniques (bump mapping, environment/ reflection mapping, etc.), and shadows. Students learn how-to implement all algorithms by using vertex and pixel shaders.

Credits	**3**
Prerequisites	CS 250

CS 314

This course covers building blocks of big data engineering. Topics include the foundational concepts of distributed computing, distributed data processing, data management, data pipelines, cloud computing, and big data analytics.

Credits	**3**
Prerequisites	CS 211

CS 315

This course delves into the intricacies of modern microprocessor architectures, instruction sets, and the relationship between source code and machine instructions. Topics include the application of assembly language for program analysis, debugging, optimization, and gaining deeper insights into the impact of high-level code modifications. Additionally, it explores how CPU and memory architectures, cache hierarchies, and memory access patterns play crucial roles in program execution efficiency and overall system performance.

Credits	**3**
Prerequisites	CS 100, CS 225

CS 318

This course explores the mathematical foundations of digital signal processing, with applications to digital audio programming. Topics include: digital signals, sampling and quantization, complex numbers and phasors, complex functions, feedforward filters, feedback filters, frequency response and transfer functions, periodic signals and Fourier series, discrete Fourier transform and fast Fourier transform, comb and string filters, Z-transform and convolution.

Credits	**3**
Prerequisites	MAT 200 **OR** MAT 230

Notes

Credit may be given for MAT 320 or for CS 318, but not both

CS 319

This course continues to explore the mathematical foundations of digital signal processing, with applications to digital audio programming. Topics include: Review of digital signals, Z-transforms and convolution, filter types, applications of fast Fourier transform, switching signals on and off, windowing, spectrograms, aliasing, digital to analog conversion, Nyquist Theorem, filter design, Butterworth filters, reverb, and the phase vocoder.

Credits	**3**
Prerequisites	CS 318 **OR** MAT 320

Notes

Credit may be given for MAT 321 or CS 319, but not both

CS 325

This course presents fundamental topics in the field of human-computer interface design. Topics covered in the course will help students understand human capabilities, design principles, prototyping techniques and evaluation methods for human-computer interfaces, with special emphasis on natural user interfaces. The course will guide the students towards an implementation of a novel user interaction.

Credits	**3**
Prerequisites	CS 280

CS 330

This course covers a variety of algorithms and algorithmic patterns. It focusses on developing an understanding of the internal structure, workings, and common properties of algorithms. Topics include divide-and-conquer, dynamic programming, greedy algorithms, incremental improvement, and computational complexity.

Credits	**3**
Prerequisites	**CS 280, MAT 200 or MAT 230**

CS 350

This course deals with the efficient representation and processing of complex 3D scenes in order to avoid bottlenecks in the use of the CPU and the GPU. Specific topics include a variety of spatial data structures (binary space-partitioning trees, octrees, kd-trees, and grid data structures), several object-culling methods (occlusion, viewport, and portal), and finally the construction and uses of bounding volumes and their hierarchies for collision detection and related geometric operations.

Credits	**3**
Prerequisites	**CS 300**

CS 355

This course presents an introduction to multi-threaded and distributed programming. The course covers some classical problems and synchronization mechanisms, as well as modern libraries that support parallel programming. The course also covers distributed programming models and applications to video game programming.

Credits	**3**
Prerequisites	**CS 330**

CS 362

This course introduces the fundamental concepts and numerical methods employed in the field of operations research. The course focuses on methods in constraint-based optimization. Topics include linear programming, inventory modeling, and decision-making under uncertainty.

Credits	**3**
Prerequisites	**CS 230, MAT 225 or MAT 230, MAT 250**

CS 365

This course covers a wide range of topics in software engineering from the practical standpoint. It encompasses project management issues as well as technical development principles and methods. Topics include system architecture, security, methodologies and notation, UML, object oriented analysis and design, requirements analysis, implementation, verification, validation, maintenance, and software engineering standards. Risk management and iterative design receive special emphasis. Student teams apply acquired knowledge to a substantial project.

Credits	**3**
Prerequisites	**CS 225**

CS 370

This course introduces image-processing methods and applications relevant to the development of real-time interactive simulations. The course covers fundamental concepts in image representation, image filtering, frequency domain processing, and image-based rendering methods. Topics include image serialization, 2D filtering, Fourier transforms, noise modeling, and high dynamic-range imaging.

Credits	**3**
Prerequisites	**CS 280**

CS 372

This course covers fundamental concepts and techniques in machine learning and their practical applications in various domains. Topics include key principles of learning theory, methods for model selection and evaluation, regression analysis and classification algorithms. Additional topics may explore unsupervised learning and emerging topics in the field.

Credits	**3**
Prerequisites	**CS 232 OR CS 225, MAT 140, MAT 150**

CS 373

This course focuses on recommendation systems and reinforcement learning methods in machine learning. Topics include clustering, classification, exploration-exploitation dilemma, q-learning, reinforcement learning environments and hyperparameter tuning.

Credits	**3**
Prerequisites	**CS 232 OR CS 225, MAT 140, MAT 150**

CS 374

This course introduces fundamental methods and algorithms in the field of Natural Language Processing. Topics include regular expressions, finite-state automata, language morphology, syntactic parsing, and parts-of-speech tagging. Additional topics may include feature extraction, unification, and lexical semantics.

Credits	**3**
Prerequisites	**CS 280 and MAT 258**

CS 375

This course presents fundamental topics in the field of compiler construction. Topics covered in the course will help students understand and implement a compiler for a high-level programming language. The course will guide the students towards an in-depth understanding of compilation techniques and runtime implementation for a modern programming language.

Credits	**3**
Prerequisites	**CS 330, MAT 258**

CS 376

This course introduces the theory and applications of neural networks and deep learning. Topics include artificial neural networks, backpropagation, hyperparameter selection and optimization methods in deep learning, convolutional and recurrent neural networks, deep reinforcement learning, large language models, and generative models. Additional topics may include other recent advancements in deep learning.

Credits	**3**
Prerequisites	**MAT 140, and MAT 258, and (MAT 345 OR CS 372 or CS 373)**

CS 380

This course introduces students to a wide range of concepts and practical algorithms that are commonly used to solve game AI problems. Case studies from real games are used to illustrate the concepts. Students have a chance to work with and implement core game AI algorithms. Topics covered include the game AI programmer mindset, AI architecture (state machines, rule-based systems, goal-based systems, trigger systems, smart terrain, scripting, message passing, and debugging AI), movement, pathfinding, emergent behavior, agent awareness, agent cooperation, terrain analysis, planning, and learning/adaptation.

Credits	**3**
Prerequisites	**CS 280**

CS 381

This course covers fundamental areas of Artificial Intelligence, including various search algorithms, game playing, constraint satisfaction problems, propositional and first-order logic, and planning. The course will also explore practical skills relevant to implementation of AI techniques, practices, and design solutions.

Credits	**3**
Prerequisites	**CS 330, MAT 258**

CS 388

This course introduces students to portable game systems programming and development, which is different from PC programming and development due to the embedded structure of the machine. Students work with a very limited amount of memory and CPU power. To overcome the system's memory limitations, several graphics techniques are used, such as tile-based game objects and backgrounds using color palettes. As for the CPU limitations, fixed point decimal is used instead of float numbers, along with asynchronous operations. Several portable game system specific topics, such as managing multiple graphics engines simultaneously and handling the touch pad are discussed.

Credits	**3**
Prerequisites	**CS 250, GAM 250**

CS 391

This course focuses on understanding the details for the computer, compiler, and language, specifically how to apply these towards practical problem of solving crashes and performance issues. The emphasis is not only on knowing what and why, but also about taking that knowledge and creating useful tools and techniques for solving these problems.

Credits	**3**
Prerequisites	**CS 280**, **CS 315**

CS 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**Permission of instructor required.**

CS 460

3D animation and modeling play significant roles in computer simulation and video game software. Game developers need to have a comprehensive understanding of these techniques. This course introduces algorithms for specifying and generating motion for graphical objects. It addresses practical issues, surveys accessible techniques, and provides straightforward implementations for controlling 3D moving entities with different characteristics. The class covers two broad categories. Students will first learn an interpolation-based technique, which allows programmers to fill in the details of the motion or shape once the animator specifies certain basic information, such as key frames, paths, coordinate grids, or destination geometry. Then, they learn a behavior-based technique, which generates motion that satisfies a set of rules, such as kinematics, physics, or other constraints.

Credits	**3**
Prerequisites	**CS 300**, **CG 130**, **MAT 300**

CS 500

This course focuses on rendering techniques used for ray tracing. The course culminates with an implementation of a path-tracing algorithm able to generate images demonstrating lighting and modeling techniques not found in traditional real-time graphics. Topics include solid modeling, intersection calculations, and illumination models.

Credits	**3**
Prerequisites	**CS 300** or **CS 541**

CS 518

This course explores the mathematical foundations of digital signal processing, with applications to digital audio programming. Topics include: digital signals, sampling and quantization, complex numbers and phasors, complex functions, feedforward filters, feedback filters, frequency response and transfer functions, periodic signals and Fourier series, discrete Fourier transform and fast Fourier transform, comb and string filters, Z-transform and convolution.

Credits	**3**
Prerequisites	**ADMISSION TO MSCS**

CS 519

This course continues to explore the mathematical foundations of digital signal processing, with applications to digital audio programming. Topics include: Review of digital signals, Z-transforms and convolution, filter types, applications of fast Fourier transform, switching signals on and off, windowing, spectrograms, aliasing, digital to analog conversion, Nyquist Theorem, filter design, Butterworth filters, reverb, and the phase vocoder.

Credits	**3**
Prerequisites	**CS 518**

CS 525

This course covers advanced features and techniques in C and C++. It focuses on developing an understanding of interaction and communication between classes and objects. Topics include bit manipulations, advanced memory management, advanced function and class templates, inheritance, design patterns, and STL containers and algorithms.

Credits	**3**
Prerequisites	**None**

CS 529

This course presents techniques in real-time interactive simulation and video game implementations. It introduces the 2D and 3D game engine architecture, including game and system components separation, game flow, game state manager, handling input/output, and the frame rate controller. The course introduces students to the game development environment, such as Windows programming SDK and graphics library DirectX API. It also covers commonly practiced techniques such as space partitioning, AI techniques, particle systems, and collision algorithms. Several physics techniques are discussed and implemented, such as jump and reflection, in addition to behavior algorithms, such as state machines. Different game genres are explained, including Asteroids (2D), Platform (2D), Brix (2D), and Pong (3D). Students learn how to implement and extend collision, matrix, and vector libraries, according to the specific requirements for different games.

Credits	**3**
Prerequisites	**None**

CS 532

This course covers basic concepts of data processing, cleaning, summarization, and visualization. The course introduces exploratory data analysis, and basic concepts of probability and statistics as they are applied in data analysis.

Credits	**3**
Prerequisites	**None**

CS 535

This course covers a variety of algorithms and algorithmic patterns. It focuses on developing an understanding of the internal algorithmic structure and common properties of the algorithms. Topics include divide-and-conquer, dynamic programming, greedy algorithms, incremental improvement, and computational complexity.

Credits	**3**
Prerequisites	**None**

CS 541

This course introduces fundamental algorithms and mathematical principles for implementing realistic three-dimensional computer graphics. Topics include homogeneous coordinates, 3D transformations, modern BRDF lighting and shading, shadow generation algorithms, reflections and the generation of reflection and bump/normal maps.

Credits	**3**
Prerequisites	**None**

CS 545

This course presents a variety of computational tools for modeling and understanding complex data and explores the data science lifecycle. Topics include manipulating data, exploratory data analysis, statistical inference, spam filters and naïve Bayes, neural networks, and machine learning algorithms such as linear regression, k-nearest neighbors, and k-means. The course will focus on both understanding the mathematics underlying the computational methods and gaining hands-on experience in the application of these techniques to real datasets.

Credits	**3**
Prerequisites	**None**

CS 550

This course will cover the implementation of various physics topics, as well as collision detection and collision resolution algorithms. Special topics such as stacking, soft-bodies, and friction may be covered.

Credits	**3**
Prerequisites	**PHY 300 or PHY 500**

CS 560

3D animation and modeling play significant roles in computer simulation and video game software. Game developers need to have a comprehensive understanding of these techniques. This course introduces algorithms for specifying and generating motion for graphical objects. It addresses practical issues, surveys accessible techniques, and provides straightforward implementations for controlling 3D moving entities with different characteristics. The course covers two broad categories. Students first learn an interpolation-based technique, which allows programmers to fill in the details of the motion or shape once the animator specifies certain basic information, such as key frames, paths, coordinate grids, or destination geometry. Then they learn a behavior-based technique, which generates motion that satisfies a set of rules, such as kinematics, physics, or other constraints.

Credits	**3**
Prerequisites	**CS 529**, **CS 541**, **MAT 500**

CS 561

This course is the continuation of Advanced Animation and Modeling I. It introduces students to advanced animation and modeling algorithms and techniques in some special areas to increase the physical realism of dynamic objects in 3D graphical environments. The topics include group object (particles, fish, and birds) control, natural phenomena (water, snow, soil, smoke, and fire) simulation, plant (trees and grass) modeling, facial animation (expression and speech synchronization), and deformable object modeling.

Credits	**3**
Prerequisites	**CS 560** or **CS 460**

CS 562

This course introduces students to data structures, algorithms, and techniques concerned with rendering images more accurately and efficiently in interactive computer simulations and video game software. Topics include patch and surface algorithms, terrain rendering techniques, anti-aliasing theory and practice, advanced lighting techniques, hard and soft shadow map methods, multi-pass rendering techniques, high-dynamic range (HDR) rendering, advanced shading and mapping, and real-time vertex/pixel shader programming essentials. Additionally, students practice these subjects by working with the supporting OpenGL or DirectX libraries.

Credits	**3**
Prerequisites	**CS 300** or **CS 541**

CS 570

This course introduces image-processing methods and applications relevant to the development of real-time interactive simulations. The course covers fundamental concepts in image representation, image filtering, frequency domain processing, and image-based rendering methods. Topics include image serialization, 2D filtering, Fourier transforms, noise modeling, and high dynamic-range imaging.

Credits	**3**
Prerequisites	**None**

CS 571

This course introduces the structure and implementation of the computer vision pipeline. Topics covered include image analysis, feature detection, Fourier transforms, pattern recognition, image stitching, and computational photography.

Credits	**3**
Prerequisites	**CS 570** or **ECE 420**

CS 572

This course covers fundamental concepts and techniques in machine learning and their practical applications in various domains. Topics include key principles of learning theory, methods for model selection and evaluation, regression analysis and classification algorithms. Additional topics may explore unsupervised learning and emerging topics in the field.

Credits	**3**
Prerequisites	**None**

CS 573

This course focuses on recommendation systems and reinforcement learning methods in machine learning. Topics include clustering, classification, exploration-exploitation dilemma, q-learning, reinforcement learning environments and hyperparameter tuning.

Credits	**3**
Prerequisites	**None**

CS 576

This course introduces the theory and applications of neural networks and deep learning. Topics include artificial neural networks, backpropagation, hyperparameter selection and optimization methods in deep learning, convolutional and recurrent neural networks, deep reinforcement learning, large language models, and generative models. Additional topics may include other recent advancements in deep learning.

Credits	**3**
Prerequisites	**None**

CS 580

This course introduces students to a wide range of concepts and practical algorithms that are commonly used to solve video game AI problems. Case studies from real games are used to illustrate the concepts. Students have a chance to work with and implement core game AI algorithms. Topics covered include the game AI programmer mindset, AI architecture, such as state machines, rule-based systems, goal-based systems, trigger systems, smart terrain, scripting, message passing, and debugging AI, movement, pathfinding, emergent behavior, agent awareness, agent cooperation, terrain analysis, planning, and learning/adaptation.

Credits	**3**
Prerequisites	**None**

CS 581

This course covers important AI areas, including search algorithms, knowledge representation, production systems, game playing, uncertainty handling, learning, and planning. Students are required to have basic knowledge of data structures, probability theory, and mathematical logic. Upon successful completion of this course, students have gained an understanding of the skills relevant to modern AI techniques, practices, and design solutions.

Credits	**3**
Prerequisites	**None**

CS 598

Every semester, guest speakers, faculty members, and/ or graduate students offer to DigiPen students a number of presentations that cover different research topics in computer science. Each speaker decides on the choice of topic, but they usually are within the general boundaries of students' courses of study. This seminar aims not to pursue any particular topic but rather to explore new research in more depth to allow students to develop their own skills in theoretical analysis. Each speaker's paper(s) are available to students. They are required to read these papers and to choose one to expand upon for a final paper and an oral presentation.

Credits	**1**
Prerequisites	**None**

CS 599

The content of this course may change each time it's offered. It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

CS 601

This course provides the student with an opportunity to study and apply research methods to a Computer Science topic of his/her choice. The student works with a faculty advisor to determine an appropriate area of research to survey, conducts a comprehensive survey of the area, and identifies tools and methods that may help the student in extending existing research. The student is required to write a survey report that summarizes the findings of this exploratory process.

Credits	**3**
Prerequisites	**Permission of instructor**

CS 602

This course is the final part of the master's program thesis. Students work under the supervision of a thesis advisory committee to develop the theory and algorithms of the proposed research topic, usually leading to creation of a prototype to verify the theory and methods. Upon completion of the class, the student must submit his or her formal written thesis to the advisory committee and pass an oral exam defending the thesis.

Credits	**3**
Prerequisites	**CS 601**

CS 605

This capstone course provides students with the opportunity to apply advanced knowledge and skills to a substantial real-world problem or industry-relevant challenge within the field of computer science. Students will propose, design, develop, and evaluate a practical software or systems-based solution. The course emphasizes the application of technical, analytical, and project management skills. Deliverables include a formal project proposal, system design documentation, implementation of a functioning product or prototype, and a final written report and oral presentation that critically assess the project's outcomes, challenges, and broader impact.

Credits	**3**
Prerequisites	**Permission of instructor required.**

CSX 510

This course presents topics in computer programming, assuming no prior background experience in the subject. Emphasis is on automation of tasks. Topics may include: logic, program flow, variables, operators, conditionals, loops, and functions. Students are exposed to at least one current industry standard scripting language used by artists in the film and video games industries.

Credits	**3**
Prerequisites	**None**

MCM 600

Maintaining continuous matriculation is a requirement for graduate students. Students who have completed most course requirements but are finishing their thesis or are satisfying incomplete grades must register to maintain continuous matriculation. This credit may not be applied toward degree completion requirements.

Credits	**1**
Prerequisites	**None**

Computer Science Projects

CSP 200

This course is the first semester of a two-semester project, which will be continued in CSP 250, and focuses on the creation of a useful software application or tool. It provides the opportunity to work together on teams of three or more members, to implement technical features required by their chosen projects.

Credits	**4**
Prerequisites	**CS 170, CS 230, and GAM 150**

Notes

Credit may be received for only one of: CSP 200, GAM 200, GAM 205.

CSP 250

This course is the second semester of a two-semester project. It provides the opportunity to work in teams on implementation of a software solution for a scientific or computing problem. The focus of this course is implementing a software solution, iterating on the implementation to meet the technical requirements of the project, and presenting the outcomes effectively.

Credits	**4**
Prerequisites	**CSP 200**

Notes

Credit may be received for only one of: CSP 250, GAM 250, GAM 255.

CSP 300

This course is the first semester of a two-semester project, which will be continued in CSP 350, and focuses on the creation of an advanced software application or tool. It provides the opportunity to work together on teams of three or more members, to implement technical features required by their chosen projects.

Credits	**4**
Prerequisites	**CS 280, CSP 250 or GAM 250**

Notes

Credit may be received for only one of: CSP 300, GAM 300, GAM 302.

CSP 350

In this course, students work to complete and polish the projects they began in CSP 300.

Credits	**4**
Prerequisites	**CSP 300**

Notes
Credit may be received for only one of: CSP 350, GAM 350, GAM 352.

CSP 400

This course is the first semester of a two-semester project, which will be continued in CSP 450, and focuses on the creation of an innovative software application or tool. It provides the opportunity to work independently or in teams, as appropriate to the scope of the project, which could include continuing to expand and improve on an earlier project.

Credits	**4**
Prerequisites	**CSP 350 or GAM 350 or GAM 390**

Notes
Credit may be received for only one of: CSP 400, GAM 400.

CSP 450

In this course, students work to complete and polish their project from CSP 400.

Credits	**4**
Prerequisites	**CSP 400**

Notes
Credit may be received for only one of: CSP 450, GAM 450.

Design

DES 100

This course introduces the design process as it applies to interactive experiences. Topics include exploration, research, proposals, prototypes, iteration, and polishing of an interactive experience.

Credits	**4**
Prerequisites	**None**

DES 101

This course explores the principles of interactive design and how those principles are used to create engaging experiences. Topics include the nature of the design profession, how tension leads to engagement, complexity versus depth, and how to test interactive experiences effectively.

Credits	**4**
Prerequisites	**None**

Notes
Credit may be received for only one of: DES 101, GAT 110.

DES 115

This course is an introduction to game design theory and the process of designing games. Topics may include design principles, writing rules, playtesting, game state, randomness, hidden information, and game balance.

Credits	**3**
Prerequisites	**None**

Notes
Credit may be received for only one of: DES 105, DES 115, GAT 210.

DES 205

This course examines the history and evolution of games of all types from ancient civilizations to modern digital and non-digital games. An emphasis is placed on experiencing many types of games, understanding their origins, and placing them within their historical context. Topics include identification of mechanics, important designers, and exemplar games of each genre.

Credits	**3**
Prerequisites	**None**

DES 212

This course focuses on how to analyze and simulate game systems from a technical perspective. Both economic and combat systems are the focus, with automation and telemetry used for debugging, analyzing, and balancing those systems.

Credits	**3**
Prerequisites	**DES 115, and CS 230**

Notes
Credit may be received for only one of: DES 212, DES 220, GAT 211.

DES 214

The course focuses on methods for creating engaging spatial environments, both through the use of procedural generation and traditional level editors. How to use encounters to control progression, how to guide players through a space, and how to use telemetry to analyze levels will also be covered.

Credits	**3**
Prerequisites	**DES 115**, **CS 230**

Notes

Credit may be received for only one of: DES 214, DES 240, GAT 240.

DES 215

This course is an introduction to the foundational techniques used to create dynamic user interfaces for games, automate and debug gameplay, model and control physics-based movement, and build complex multi-part game entities.

Credits	**3**
Prerequisites	**DES 115**, **CS 230**

Notes

Credit may be received for only one of: DES 215, DES 250, DES 315.

DES 220

This course introduces the basic principles of system design and game mechanics with an emphasis on dynamic combat systems, player agency, and system balance. Additional topics include system economics and player perception of a system.

Credits	**3**
Prerequisites	**DES 101**

Notes

Credit may be received for only one of: DES 212, DES 220

DES 230

This course introduces the principles of narrative theory and how it applies to and informs the design of an interactive experience. The course will explore both traditional and interactive storytelling structures and will study the elements of narrative design with a particular emphasis on narrative engagement through characters, environment, and pacing.

Credits	**3**
Prerequisites	**DES 101** or **DES 115** or **DES 116, and ENG 110** or **ENG 116**

DES 240

This course introduces the basic principles of level and encounter design. The course focuses on the design of spatial environments, player guidance techniques, and controlling pacing through encounter frequency and variety.

Credits	**3**
Prerequisites	**DES 101**

Notes

Credit may be received for only one of: DES 214, DES 240

DES 250

This course introduces designers to the core components of modern game engines and technical design patterns for games. Topics include the design and implementation of character controllers, camera systems, and game state management.

Credits	**3**
Prerequisites	**CS 116** or **CS 120**, **DES 100** or **DES 115**

Notes

Credit may be received for only one of: DES 250, DES 315, GAT 240.

DES 260

This course explores fundamental principles of interactive design and psychological principles related to design. Emphasis is placed on information architecture, graphic design concepts, user interface documentation, and interface prototyping techniques.

Credits	**3**
Prerequisites	**DES 101**, or **DES 115**

Notes

Credit may be received for only one of: DES 260, GAT 260, ART 260.

DES 270

This course introduces the basic principles of user research and formal testing methodologies based on the scientific method. Topics include qualitative and quantitative research methods, test candidate selection, data analysis, information visualization, and end-user research.

Credits	**3**
Prerequisites	**DES 101** or **DES 115**, and **PSY 101**

DES 315

This course focuses on designing and implementing digital game prototypes, with an emphasis on integrating mechanics, controls, and camera. Additional topics include building tension to create engagement and implementing player feedback techniques.

Credits	**3**
Prerequisites	**DES 212, DES 214**

Notes

Credit may be received for only one of: DES 250, DES 301, DES 315, GAT 250.

DES 320

This course explores advanced techniques of system design and game mechanics with an emphasis on game economies and system balance.

Credits	**3**
Prerequisites	**DES 212 or DES 220, and MAT 105 or MAT 258**

DES 325

This course focuses on designing and implementing modern tabletop games. Topics include modern tabletop design and development techniques, production processes, identifying user demographics, and preparing a tabletop game design for publication.

Credits	**3**
Prerequisites	**DES 220**

DES 326

This course focuses on the principles of puzzle design for traditional puzzles, computer game puzzles, and interactive puzzle events. The course will explore a variety of puzzle design techniques and puzzle crafting tools.

Credits	**3**
Prerequisites	**DES 212, or DES 220**

DES 330

This course focuses on advanced topics in narrative design. An emphasis is placed on character archetypes, voices, and arcs, and on writing stories that integrate with gameplay and mechanics. Topics include dialogue trees, emergent gameplay, and advanced narrative techniques.

Credits	**3**
Prerequisites	**DES 230**

DES 335

This course focuses on the structure and content of non-digital role-playing games. The course will explore the design of systems for character creation, character advancement, conflict resolution, equipment, and skills. An emphasis will be placed on world design, adventure development, and the interaction between narrative and system.

Credits	**3**
Prerequisites	**DES 212 or DES 220, and DES 230**

DES 337

This course focuses on world building for games. The course will explore the differences in designing for real historical times and places, alternate realities, and imaginary worlds.

Credits	**3**
Prerequisites	**DES 230**

DES 340

This course explores advanced techniques of level and encounter design. Topics include designing evocative themed spaces and encounter environments, environmental storytelling, advanced guidance techniques, and level transition techniques.

Credits	**3**
Prerequisites	**DES 214 or DES 240**

DES 345

This course explores the setup, development, and pacing of a game's content through missions and quests. An emphasis is placed on applying the theme, mood, and narrative direction to the level and content design.

Credits	**3**
Prerequisites	**DES 230, and DES 214 or DES 240**

DES 350

This course explores advanced components of modern game engines and technical design patterns for games. Topics include data management, advanced control systems, advanced cameras, and asset management.

Credits	**3**
Prerequisites	**CS 165 or CS 170, and DES 250 or DES 315**

DES 360

This course explores advanced topics and techniques for designing successful user experiences in a variety of media with an emphasis on adaptive, flexible digital interfaces. Topics include interaction design processes and artifacts, adaptive layouts, design pivots, and visual design techniques.

Credits	**3**
Prerequisites	**DES 260**

DES 365

This course explores how visuals, audio, programming, and design intersect to create immersive interactive experiences. Emphasis is placed on the implementation of dynamic user interfaces, intuitive real-time feedback, and immersive control systems.

Credits	**3**
Prerequisites	**DES 250, DES 260**

Notes

Credit may be received for only one of: DES 365, GAT 261.

DES 370

This course covers advanced user research techniques with an emphasis on information visualization. Topics include methods for collecting and building data sets, assessing the quality of those data sets, selecting the optimal method for data visualization, and creating user research reports.

Credits	**3**
Prerequisites	**DES 270**

Notes

Credit may be received for only one of: DES 370, GAT 370.

DES 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**Permission of instructor required.**

DES 400

This course focuses on designing and implementing an original digital experience that integrates sensory, narrative, and interactive elements into an engaging overall work that is suitable as a portfolio piece.

Credits	**3**
Prerequisites	**CG 125, DES 303, DES 365, MUS 115**

Notes

Credit may be received for only one of: DES 400, GAT 316.

DES 420

This course focuses on designing and implementing a complete experience that showcases system design techniques and is suitable as a portfolio piece.

Credits	**3**
Prerequisites	**DES 320**

DES 430

This course focuses on designing and implementing a complete experience that showcases narrative design techniques and is suitable as a portfolio piece.

Credits	**3**
Prerequisites	DES 330

DES 440

This course focuses on designing and implementing a complete experience that showcases level design techniques and is suitable as a portfolio piece.

Credits	**3**
Prerequisites	DES 340

DES 450

This course focuses on designing and implementing a complete experience that showcases technical design techniques and is suitable as a portfolio piece.

Credits	**3**
Prerequisites	DES 350

DES 460

This course focuses on designing and implementing a complete experience that showcases user experience design techniques and is suitable as a portfolio piece.

Credits	**3**
Prerequisites	DES 360

DES 470

This course focuses on designing and implementing a detailed user research study that showcases user research techniques and is suitable as a portfolio piece.

Credits	**3**
Prerequisites	DES 370

Economics

ECN 100

This course introduces the fundamentals of micro- and macroeconomics. Topics may include supply and demand, competition, market efficiency, auctions, barter, monopolies, externalities, welfare, unemployment, growth, inflation, interest rates, exchange rates, and budget deficits.

Credits	**3**
Prerequisites	**None**

Electrical and Computer Engineering

ECE 101L

This course provides an introduction to ECE projects by pairing up students with an engineering team in a monitored environment. Students are assigned a project advisor and placed with a team that is typically enrolled in an upper-division project course. They are exposed to topics, such as the project development process, engineering practices, hardware design techniques, and software implementation issues.

Credits	**1**
Prerequisites	**None**

ECE 110

This course introduces the basics of the Computer Engineering field. The history of computer engineering, the electronics development cycle, professional ethics, multidisciplinary team environments, and common development tools used in industry are explored. The course culminates in a project involving an embedded microprocessor.

Credits	**3**
Prerequisites	CS 100

ECE 180

This course provides an introduction to audio concepts and implementation. Students are introduced to the basics of digital audio processing, digital sound synthesis, and sound perception. These concepts are reinforced through the lab projects, where students work with audio programming at the sample level.

Credits	**3**
Prerequisites	CS 100, CS 120

ECE 200

This course covers analog circuits. Topics include passive components, series and parallel circuits, two-terminal networks, circuit reduction, impedance analysis, waveform measurement, operational amplifiers, passive and active filters, circuit step response, and circuit analysis using Laplace transforms. Integration of analog subsystems into digital circuits is emphasized.

Credits	**3**
Prerequisites	CS 100, MAT 200, PHY 200

ECE 210

This course focuses on digital circuit design and electronics. Topics include combinational and sequential logic, logic families, state machines, timers, digital/analog conversion, memory devices, and basic microprocessor architecture. Integral to this course are hands-on laboratories where the circuits presented in lecture are designed, built, and tested.

Credits	**4**
Prerequisites	CS 100

ECE 220

This course focuses on designing and creating a device using components such as integrated circuits and embedded microprocessors. This device usually takes the form of a robot or electronic toy that interacts with people or the environment and demonstrates digital communication. This course introduces concepts of software engineering and process documentation, and emphasizes system-level design.

Credits	**3**
Prerequisites	ECE 110 **or** GAM 150, CS 100, ENG 110

ECE 225

This course examines the theoretical and practical foundations of mobile robotics. Fundamental topics from structural design, sensors, actuators, motors, and artificial intelligence are covered individually. Systems-level concepts of human interface, distributed robotics, requirements engineering, and ethics are covered in an integrated manner.

Credits	**3**
Prerequisites	CS 100, ECE 260, PHY 200, PHY 200L

ECE 260

As a continuation of Digital Electronics I, this course has an emphasis on programmable logic. Topics include advanced state machine design techniques and an introduction to hardware description languages (such as Verilog and VHDL). Lectures are reinforced with hands-on laboratory work involving complex programmable logic devices and field programmable gate arrays. Students are expected to complete a final project that utilizes programmable logic design.

Credits	**4**
Prerequisites	ECE 210

ECE 270

In this course, students are introduced to programming for realtime embedded systems. This course covers topics including multi-tasking, synchronization, context switching, scheduling, interrupt handling, application loading, fault tolerance, and reliability testing. Students are expected to implement their own real-time operating system for an embedded microprocessor platform.

Credits	**3**
Prerequisites	CS 280

ECE 300

This course covers topics needed to build the hardware and software for embedded systems. Core topics include microcontroller and microprocessor systems architecture, embedded system standards, and inter-process communication protocols. Additional topics may include performance measurement, peripherals and their interfaces, board buses, memory interfaces, other modern communication protocols, and system integration.

Credits	**3**
Prerequisites	CS 100, CS 170

ECE 310

This course is the first semester of a project focusing on team development of an interactive embedded system. The system is expected to integrate software and hardware in a real-time environment. Project development topics include component selection, testing, implementation, and demonstration. Team management skills, presentation skills, critical design processes, and the study and implementation of human-machine interaction and interface devices are also developed.

Credits	**4**
Prerequisites	ECE 210, ECE 220, PHY 200

ECE 350

This course presents mathematical methods of describing systems, with a focus on linear negative feedback control systems. Topics covered typically include signals and systems, Laplace and Fourier transforms, block diagrams, transfer functions, time-domain modeling, and error and stability analysis. Work is done analytically and numerically with examples from computer, electrical, and aerospace engineering, communications, and mechatronics. Additionally, students are introduced to the implementation of feedback control in embedded systems.

Credits	**3**
Prerequisites	MAT 225, MAT 256

ECE 360

This course is the second semester of a project focusing on team development of an interactive embedded system. The system is expected to integrate software and hardware in a real-time environment. Project development topics include component selection, testing, implementation, and demonstration. Team management skills, presentation skills, critical design processes, and the study and implementation of human-machine interaction and interface devices are also developed.

Credits	**4**
Prerequisites	ECE 300, ECE 310, CS 280

ECE 380

This course is an introduction to basic computer architecture and design. It studies common architecture that is found in many modern microcontrollers. Building on past digital logic design experience, teams collaborate to design and build a simplified implementation of this architecture.

Credits	**3**
Prerequisites	ECE 260, ECE 300

ECE 390

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what is learned throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**4**
Prerequisites	ECE 270, ECE 310

ECE 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

ECE 410

This course is the first semester of the Computer Engineering program capstone project. The course focuses on team development of a system that integrates software and hardware in a real-time environment. Emphasis is placed on communication and professional skills such as interview preparation, project presentations, engineering management, testing and quality control, and statistical methods. The project includes component selection, design, testing, and implementation.

Credits	**4**
Prerequisites	CS 330, ECE 260, ECE 360 **or** ECE 390, PHY 270

ECE 420

This course focuses on signals represented by a sequence of numbers or symbols and the processing of these signals. Topics in this course include continuous, discrete and fast-Fourier transforms, z-transforms, transfer functions, frequency response, finite impulse response, and infinite impulse response filters. Work is done analytically and numerically with examples from areas such as computer and electrical engineering, communications, and various scientific fields. Additionally, students are introduced to the implementation of digital signal processors in embedded systems.

Credits	**3**
Prerequisites	MAT 225, MAT 256, MAT 258

ECE 460L

This course is the second semester of the Computer Engineering program capstone project. The course focuses on team development of a system that integrates software and hardware in a real-time environment. Emphasis is placed on communication and professional skills, such as interview preparation, project presentations, engineering management, testing and quality control, and statistical methods. The project includes component selection, design, testing, and implementation.

Credits	**4**
Prerequisites	ECE 410, ECE 390 **or** ECE 490

ECE 490

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what is learned throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**4**
Prerequisites	ECE 390

English

ENG 110

This course develops critical thinking skills through reading, brainstorming, research, rhetorical analysis, and writing. It includes a consideration of Generative Artificial Intelligence's influence on the writing process and addresses the basics of style and grammar.

Credits	**3**
Prerequisites	**None**

ENG 116

This course surveys key elements of storytelling and examines how they work individually and in tandem to craft successful stories. Through a multi-genre analysis of texts such as short stories, novels, films, and video games, along with creative writing exercises, it explores worldbuilding, character development, setting, plot, and more.

Credits	**3**
Prerequisites	**None**

ENG 120

In this composition course, students practice advanced argumentative essay writing with a focus on research, critical analysis of the research, thesis presentation, and defense. During the semester, students write several research essays on various topics using both traditional and new information techniques.

Credits	**3**
Prerequisites	ENG 110

ENG 150

This course studies myths from different world cultures. It provides an in-depth discussion of the Hero's Journey (a basic pattern that appears in many narratives) and its principal archetypes. It also studies mythology across the arts and examines how essential it is to the study of literature, drama, film and video games.

Credits	**3**
Prerequisites	ENG 110 **or** ENG 116

ENG 230

This course is a survey of speculative fiction (in literature, television, film, and graphic novels) that moves beyond pure realism to include fantastic or imaginative elements and to present worlds that differ significantly from our own. Each semester, the course will focus on one or more sub-genres which may include science fiction, fantasy, horror, magic realism, alternate history, steampunk, or cyberpunk.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

ENG 242

This course explores what modernity and post-modernity have or have not meant to American writers whose histories and cultures are not European in origin but whose writings are steeped in European-American literary traditions. The course explores the cultural hybridism of this literature as well the unique visions of the world they have created. These funny, humorous, bitterly satirical, and downright serious (post)- modern fantasies are quintessentially American, yet also unique and peculiar to these authors' ethnic experiences. The selected works also offer an opportunity to read or re-read well established and newer American works of literature.

Credits	**3**
Prerequisites	**ENG 110, ENG 150**

ENG 243

This course provides an introduction to the epic as a genre, including poetry, drama, and novels. Particular attention is paid to the theme of heroism and its many cultural manifestations.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

ENG 245

This course provides an introduction to the study and practice of fiction writing including characterization, plot, setting, and point of view. It presents selected works of short and long fiction. The course is an opportunity for students to practice their own creative writing skills. They are required to write at least two short stories.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

ENG 246

This course covers prominent themes and techniques in American ethnic literatures such as Native, African, Asian, and Hispanic American literatures. Modern texts are emphasized but pre- or early 20th century classics may also be included.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

ENG 250

This course provides an introduction to the study of graphic novels, a unique field of inquiry encompassing many world cultures and drawing on many disciplines. Students will read, discuss, and analyze many different types of graphic novels, such as stand-alone, serial, and adaptive books.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

ENG 280

This course introduces the multifaceted genre of creative nonfiction—true stories told creatively with the narrative tools of fiction. Various forms are covered, including autobiography, memoir literature, and the personal essay. Other subgenres such as nature, travel, or science writing may be considered.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

ENG 317

This course covers the fundamentals of concept development, dramatic structure, and writing for film. It leads to the completion of at least one original pre-production script in screenplay format.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

ENG 340

This course focuses on the generation of creative writing in multiple genres and media, including poetry, fiction, creative nonfiction, and graphic novels. Students study and practice writing in a workshop atmosphere and engage in intensive reading of excellent writings, most of which employ interdisciplinary, cross-genre approaches that encompass painting, photography, and other visual art. Discussions of readings are followed by writing experiments designed to spark original thinking, to develop facility with writing, and to enhance understanding of the creative process. Students gain in-depth knowledge of the possibilities of creative writing and apply this experience by writing both short creative pieces and longer works.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

ENG 360

This course introduces students to expressions and representations of gender/sexual identity in literary works, including poetry, fiction, creative non-fiction, drama, and film. The course takes a historical and multicultural approach to the topic, covering key texts from the past and the present by authors from different cultures and backgrounds.

Credits	**3**
Prerequisites	**ENG 116 or ENG 150 or ENG 230 or ENG 242 or ENG 243 or ENG 245 or ENG 246 or ENG 250**

ENG 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**Permission of instructor required.**

ENG 400

This course focuses on the narrative elements of creative writing. Exercises generate thinking and hone students' basic storytelling talents, including characterization, exposition, plot, conflict, back-story, dialogue, and appropriate use of language. Students learn how to use symbols to design a story and how to manipulate the symbols to create character, plot, message, and interactivity. Students are encouraged to access their own genius, culture, and life experience in the development of their stories.

Credits	**3**
Prerequisites	**ENG 150 or ENG 110**

ENG 440

This course builds upon the concepts and skills taught in previous writing courses. This course offers students the opportunity to further develop their fiction-writing skills by engaging in intensive writing and regular critique of their peers' creative work. The emphasis is on refining narrative writing skills and developing individual style and voice. Students write three full-length short stories and read contemporary fiction by established authors not discussed in previous courses.

Credits	**3**
Prerequisites	**ENG 245 or ENG 315 or ENG 340**

Film

FLM 115

This course examines the more than 100-year history of film and animation. Beginning with the scientific and technical advances that made these media technologies possible, students explore every major movement and genre as well as their impact on society. The course gives students critical vocabulary required for explaining story, animation, and cinematic techniques.

Credits	**3**
Prerequisites	**None**

FLM 151

Animation is ultimately filmmaking, and animators should learn from the many classics on how to effectively bring various film production elements together. Students review several films and study how the relationships between scripts, cameras, lighting, sets, production design, sound, acting, costumes, props, directing, and production lead to successful visual stories. They also examine the fundamental theories underlying visual storytelling. Understanding the creative processes utilized by these influential filmmakers provides insight into how students may improve their own animations.

Credits	**3**
Prerequisites	**None**

FLM 201

This course explores camera composition, lighting, and editing techniques through a series of cinematic projects. Topics include 2D and 3D camera moves, film and script analysis, storytelling conventions, choreography, and staging.

Credits	**3**
Prerequisites	**FLM 115**

FLM 210

This course focuses on the technical aspects of cinematography including understanding how cameras work, how images are captured and processed, computer graphics theory, and image analysis.

Credits	**3**
Prerequisites	**FLM 115**

FLM 225

This course explores the animation pre-production skills of storyboard art. Emphasis will be placed on drawing, storytelling, and cinematography in the creation of storyboards. Topics include story flow, character development, mood, time, and place.

Credits	**3**
Prerequisites	**ANI 1000 OR ANI 151**

Notes

FLM 225 is equivalent to ART 350

FLM 375

This course explores advanced story-telling techniques with storyboarding. Emphasis will be placed on pitching story, animatic, visual storytelling, timing, and pacing. Topics include drawing storyboards for film and TV, drawing dynamic characters, camera movements and editing.

Credits	**3**
Prerequisites	**FLM 225 or ART 350**

FLM 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

FLM 525

This course explores the animation pre-production skills of storyboard art. Emphasis will be placed on drawing, storytelling, and cinematography in the creation of storyboards. Topics include story flow, character development, mood, time, and place.

Credits	**3**
Prerequisites	**None**

FLM 575

This course explores advanced story-telling techniques with storyboard ing. Emphasis will be placed on pitching story, animatic, visual storytelling, timing, and pacing. Topics include drawing storyboards for film and TV, drawing dynamic characters, camera movements and editing.

Credits	**3**
Prerequisites	**FLM 525**

FLM 5100

This course explores the animation pre-production skills of storyboard art. Emphasis will be placed on drawing, storytelling, and cinematography in the creation of storyboards. Topics include story flow, character development, mood, time, and place.

Credits	**3**
Prerequisites	**None**

FLM 5105

This course explores advanced story-telling techniques with storyboarding. Emphasis will be placed on pitching story, animatic, visual storytelling, timing, and pacing. Topics include drawing storyboards for film and TV, drawing dynamic characters, camera movements and editing.

Credits	**3**
Prerequisites	**FLM 5100 or ART 504**

Game Projects

GAM 100

This course focuses on the team development of a digital 2D game project. Topics include basic software development and developing software on a team.

Credits	**3**
Prerequisites	**None**

GAM 120

This course introduces the workflows, methodologies, and best practices for working within a modern digital game development environment. Topics may include game editors, components, basic scripting, input processing, importing art and audio, level creation, and source control.

Credits	**3**
Prerequisites	**DES 100, DES 101**

Notes

Credit may be received for only one of: GAM 120, GAM 150, GAM 152.

GAM 150

This course focuses on building a digital 2D game engine with a team and then finishing a project with that engine. Topics include software development cycles, technical design, technical problem-solving, and team problem-solving.

Credits	**3**
Prerequisites	**CS 120, GAM 100**

Notes

Credit may be received for either GAM 150 or GAM 152, not both.

GAM 200

This course is the first semester of a two-semester team project. This course focuses on understanding and practicing the processes of the pre-production phase of creating a 2D game project within a custom engine made by the team. Topics explored include techniques for working effectively on a team, following a production process, implementing software engineering best practices, and applying programming skills and knowledge to product development.

Credits	**4**
Prerequisites	**CS 170, CS 230, GAM 150**

Notes

Credit may be received for only one of: CSP 200, GAM 200, GAM 205.

GAM 205

This course focuses on understanding and practicing the processes of designing and prototyping game projects as part of a team. Topics explored include techniques for working effectively on a team, following a production process, implementing design best practices, and applying game design skills and knowledge to product development in a collaborative environment.

Credits	**4**
Prerequisites	**GAM 120, DES 250**

Notes

Credit may be received for only one of: GAM 200, GAM 205.

GAM 250

This course is the second semester of a two-semester team project. This course focuses on understanding and practicing the processes of the production phase of creating a 2D game project. Topics explored include techniques for working effectively on a team, following a production process, implementing discipline-based best practices, and applying discipline-based core skills and knowledge to product development.

Credits	**4**
Prerequisites	**GAM 200**

Notes

Credit may be received for only one of: CSP 250, GAM 250, GAM 255.

GAM 255

This course focuses on understanding and practicing the processes of designing and completing game projects as part of a team. Topics explored include techniques for working effectively on a team, following a production process, implementing design best practices, and applying game design skills and knowledge to product development in a collaborative environment.

Credits	**4**
Prerequisites	**GAM 205**

GAM 300

This course is the first semester of a two- or three-semester project, which will be continued in GAM 350, and then in GAM 375 for a three-semester project. Students will work together on teams to create a real-time game or simulation. Techniques are explored for creating high-performance teams, tuning development processes for specific projects, using advanced discipline-based best practices, and applying specialized skills to game development. This course focuses on pre-production to ensure the technology, tools, design, art, audio, and team are ready for full production.

Credits	**4**
Prerequisites	**GAM 250/CSP 250, Junior Standing**

GAM 350

In this course, students work to complete the projects they began in GAM 300. This second semester focuses on production to bring the project to the point where the target audience finds it engaging. Furthermore, techniques are explored for creating effective resumes, interviewing, and pursuing internships. The project may be continued for a third semester in GAM 375.

Credits	**4**
Prerequisites	**GAM 300 or GAM 302**

Notes

Credit may be received for only one of: CSP 350, GAM 350, GAM 352.

GAM 375

This course is the final semester of the three-semester project begun in GAM 300 and continued in GAM 350. Techniques are explored for polishing design, art, and audio, creating effective marketing materials, and highlighting individual contributions to the project. This semester focuses on post-production and shipping a highly polished final project.

Credits	**4**
Prerequisites	**GAM 350 or GAM 352**

GAM 390

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**4**
Prerequisites	**GAM 250**

GAM 400

In this course, students prepare their personal portfolio of projects in order to be ready for a professional job search. n This can involve a new project to demonstrate a particular professional skill, or taking a previous project to very high level of quality.

Credits	**4**
Prerequisites	**GAM 350 or GAM 390 or CSP 350**

Notes

Credit may be received for only one of: CSP 400, GAM 400.

GAM 450

In this course, students prepare their personal portfolio of projects in order to be ready for a professional job search. This can involve a new project to demonstrate a particular professional skill, or working to complete a project they began in GAM 400.

Credits	**4**
Prerequisites	**GAM 400**

Notes

Credit may be received for only one of: CSP 450, GAM 450.

GAM 490

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**4**
Prerequisites	**GAM 390**

GAM 541

This project focuses on the creation of a real-time game or simulation. Students work together on teams of three to five members and implement technical features, such as audio effects, music playback, pattern movement, simple artificial intelligence, multiplayer, particle systems, scrolling, and simple physics. All projects must be written with a core of C++ code and cannot use middleware such as pre-existing physics engines, networking engines, etc. Additional topics may include an overview of the game industry, effective team communication, planning, documentation, debugging, testing, and iterative software development techniques.

Credits	**3**
Prerequisites	**CS 529**

GAM 550

This project is divided into two semesters and focuses on the creation of an advanced real-time game or simulation using the latest techniques in graphics, real-time physics, artificial intelligence, and networking. Students may use current software and hardware technologies with instructor approval, such as web technologies, gaming consoles, mobile devices, commercial physics engines, hands-free input devices, etc. Students work independently or in teams, as appropriate to the scope of their project. Additional topics may include team dynamics, formal playtesting, game pacing, and game balance.

Credits	**3**
Prerequisites	**GAM 541**

GAM 551

In this class, students work to complete the projects they began in GAM 550. Additional topics may include working in the industry, interviewing, resumes, professional networking, and career strategies.

Credits	**3**
Prerequisites	**GAM 550**

GAM 590

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**3**
Prerequisites	**None**

GAM 591

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**3**
Prerequisites	**None**

GAMX 500

This class presents an overview of game design from concept to level through play balancing, as well as an overview of the business practices traditionally and currently common to the game industry. Students develop a small game using industry tools, focusing on basic game mechanics, verbal and nonverbal narrative development, play balancing, and basic level design fundamentals.

Credits	**3**
Prerequisites	**None**

History

HIS 100

Covering a wide range of world history (Prehistoric to Middle Ages, Western and Asian Civilizations), this course provides an overview of events, civilizations, and cultures throughout time that form major historical shifts. Students analyze a series of case studies with particular focus on governments, technology, religion, and culture, and how clashes between these (and other) themes created changes in culture, power, and civilizations. Three major themes connect several topics discussed in this course with those explored in HIS 150: issues of authority and inequality within civilizations; encounters and conflicts between civilizations; and cultural and technological exchanges within and between civilizations.

Credits	**3**
Prerequisites	**None**

HIS 150

This course continues the topics covered in HIS 100, covering from approximately 1650 A.D. until present day (Renaissance to present day, Western and Asian Civilizations). Students analyze a series of case studies with particular focus on governments, technology, religion, and culture, and how clashes between these (and other) themes created changes in culture, power, and civilizations. Three major themes connect several topics discussed in this course with those explored in HIS 100: issues of authority and inequality within civilizations; encounters and conflicts between civilizations; and cultural and technological exchanges within and between civilizations.

Credits	**3**
Prerequisites	**HIS 100**

Internship

INT 390

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**4**
Prerequisites	**Permission of instructor required.**

INT 450

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**4**
Prerequisites	**Permission of instructor required.**

INT 590

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what is learned throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**3**
Prerequisites	**Permission of instructor required.**

INT 591

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what is learned throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**3**
Prerequisites	**Permission of instructor required.**

Japanese

JPN 101

This course is designed for students with little or no background in Japanese. The course presents the basics of pronunciation, orthography, speaking, listening comprehension, reading, writing, and the sociolinguistics of modern Japanese. This course emphasizes acquiring the ability to communicate and function accurately and appropriately in both speaking and writing Japanese.

Credits	**3**
Prerequisites	**None**

JPN 102

This course is designed for students who have taken JPN 101. The pace of JPN 102 is slightly faster than JPN 101. JPN 102 emphasizes acquiring the ability to communicate and function in Japanese accurately and appropriately, both in speech and in writing. By the end of the course, students are able to speak, understand, read, and write Japanese on a limited variety of topics.

Credits	**3**
Prerequisites	**JPN 101**

Law

LAW 115

The animation and computer software industries are founded upon the principle of intellectual property. This course introduces students to the social concepts and traditions that led to the idea of intellectual property. It surveys the various international legal systems governing intellectual property, giving special consideration to Title 17 and the local statutes that govern copyrights, trademarks, and patents in the United States. Students learn fundamental issues surrounding this field, such as fair use, international relations, and economics. The course also introduces students to a basic overview of contracts, including structure, traditions, and vocabulary.

Credits	**3**
Prerequisites	**None**

Management

MGT 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Prerequisites	**None**

MGT 451

This course provides in-depth examination of theories, techniques, and issues in project management. It covers various aspects of project management including team leadership, marketing, budgeting, long-range project planning, contract negotiations, and intellectual property considerations. The course includes exercises that give students insight into dealing with product conceptualization, team effectiveness and performance issues.

Credits	**3**
Prerequisites	**None**

MGT 500

This course provides an in-depth examination of techniques and theories for project management of art, film, games and other artistic team projects. Lectures cover various aspects of managing creative teams. Topics may include leadership, communication, team building, marketing, budgeting, longrange project planning, contract negotiations and intellectual property considerations.

Credits	**3**
Prerequisites	**None**

Mathematics

MAT 100

This course presents fundamentals of college algebra and trigonometry, with an introduction to concepts in 2D geometry and linear algebra. Topics include: polynomial, rational, trigonometric, exponential and logarithmic functions as well as their inverses; analytic trigonometry, trigonometric identities, the unit circle, and trigonometric functions of a real variable; introduction to linear systems, basics of linear transformations in 2D; vectors, parametric lines, dot product, and projections in 2D.

Credits	**4**
Prerequisites	**None**

MAT 105

This course presents fundamentals of probability and statistics without calculus. Topics include: data representation, population mean, variance, and standard deviation, finite probabilities, events, conditional and marginal probability, discrete random variables, binomial distribution, normal distribution, sampling distributions for mean and variance, estimation of means, confidence intervals, hypothesis testing, inference, and chi-square tests.

Credits	**3**
Prerequisites	**None**

MAT 106

This course presents the mathematics needed for calculus including: function domain and codomain, composition of functions, inverse functions, polynomials, exponential and logarithmic functions, trigonometric functions, trigonometric identities, graphs of trigonometric functions, and applications of trigonometry. Additional topics may include an introduction to vectors and matrices.

Credits	**3**
Prerequisites	**None**

Notes
Credit may be received for only one of: MAT 100, MAT 106.

MAT 120

This course explores the mathematical foundations of music and sound. Topics include scale systems, just and tempered intervals, oscillations and trigonometry, sound waves, and basic discrete mathematics.

Credits	**3**
Prerequisites	**None**

MAT 121

This course explores further topics in the mathematical foundations of music and sound, with emphasis on digital signal processing. Topics include digital signals and sampling, spectral analysis and synthesis, convolution, filtering, sound synthesis, and physical modeling.

Credits	**3**
Prerequisites	**MAT 120, CS 116**

Notes
Credit may be received for only one of: MAT 121, MAT 320

MAT 140

Topics in vector geometry include vector arithmetic, dot products, cross products, numerical representations of lines and planes, distances, angles, and intersections. Topics in linear algebra include matrices, systems of linear equations, linear transformations, and affine transformations. Additional topics may include barycentric coordinates and perspective projections.

Credits	**4**
Prerequisites	**None**

Notes

Credit may be received for only one of: MAT 100, MAT 140.

MAT 150

This course introduces the calculus of functions of a single real variable. Topics include limits, continuity, differentiation, techniques of differentiation, optimization, integration, Riemann sums, the fundamental theorem of calculus, and u-substitution.

Credits	**4**
Prerequisites	**MAT 106**

Notes

Credit may be received for only one of: MAT 150, MAT 180.

MAT 180

This course introduces the calculus of functions of a single real variable, and differential calculus of multivariate functions. Topics include: limits; continuity; differentiation; techniques of differentiation; optimization; integration; Riemann sums; the Fundamental Theorem of Calculus; curves in space; partial derivatives; gradient, divergence, and curl; and extrema of multivariate functions.

Credits	**4**
Prerequisites	**MAT 140**

Notes

Credit may be received for only one of: MAT 150, MAT 180.

MAT 200

Topics include an introduction to differential equations, applications of integrals, techniques of integration, sequences and series of real numbers, power series, and Taylor series.

Credits	**4**
Prerequisites	**MAT 150 or MAT 180**

Notes

Credit may be received for only one of: MAT 200, MAT 230.

MAT 220

This course explores further topics in the mathematical foundations of music and sound, with emphasis on digital signal processing. Topics include: Digital signals and sampling, spectral analysis and synthesis, discrete fourier transforms, FFT, convolution, filtering, wave equation, Bessel functions, sound synthesis and physical modeling.

Credits	**3**
Prerequisites	**MAT 200 or MAT 230**

Notes

Credit may be received for MAT 220 or MAT 320 but not for both.

MAT 225

This course extends the basic ideas of calculus to the context of functions of several variables and vector-valued functions. Topics include partial derivatives, tangent planes, and Lagrange multipliers. The study of curves in two- and three space focuses on curvature, torsion, and the TNB-frame. Topics in vector analysis include multiple integrals, vector fields, Green's Theorem, the Divergence Theorem and Stokes' Theorem. Additionally, the course may cover the basics of differential equations.

Credits	**3**
Prerequisites	**MAT 200 or MAT 230**

MAT 230

This course studies sequences and series, and integral calculus of single and multivariate functions. Topics include: an introduction to differential equations; applications of integrals; techniques of integration; sequences and series of real numbers; power series; Taylor series; double, triple, line, and surface integrals; and the theorems of Green, Gauss and Stokes.

Credits	**4**
Prerequisites	**MAT 180**

Notes

Credit may be received for only one of: MAT 200, MAT 230.

MAT 250

This course presents the mathematical foundations of linear algebra, which includes a review of basic matrix algebra and linear systems of equations as well as basics of linear transformations in Euclidean spaces, determinants, and the Gauss-Jordan Algorithm. The more substantial part of the course begins with abstract vector spaces and the study of linear independence and bases. Further topics may include orthogonality, change of basis, general theory of linear transformations, and eigenvalues and eigenvectors. Other topics may include applications to least-squares approximations and Fourier transforms, differential equations, and computer graphics.

Credits	**3**
Prerequisites	**MAT 200 or MAT 230**

MAT 256

This course introduces the basic theory and applications of first and second-order linear differential equations. The course emphasizes specific techniques such as the solutions to exact and separable equations, power series solutions, special functions and the Laplace transform. Applications include RLC circuits and elementary dynamical systems, and the physics of the second order harmonic oscillator equation.

Credits	**3**
Prerequisites	**MAT 200 or MAT 230**

MAT 258

This course gives an introduction to several mathematical topics of foundational importance in the mathematical and computer sciences. Typically starting with propositional and first order logic, the course considers applications to methods of mathematical proof and reasoning. Further topics include basic set theory, number theory, enumeration, recurrence relations, mathematical induction, generating functions, and basic probability. Other topics may include graph theory, asymptotic analysis, and finite automata.

Credits	**3**
Prerequisites	**MAT 200 or MAT 230**

MAT 300

This course is an introduction to parameterized polynomial curves and surfaces with a view toward applications in computer graphics. It discusses both the algebraic and constructive aspects of these topics. Algebraic aspects include vector spaces of functions, special polynomial and piecewise polynomial bases, polynomial interpolation, and polar forms. Constructive aspects include the de Casteljau algorithm and the de Boor algorithm. Other topics may include an introduction to parametric surfaces and multivariate splines.

Credits	**3**
Prerequisites	**MAT 250, MAT 258**

MAT 320

This course explores the mathematical foundations of digital signal processing, with applications to digital audio programming. Topics include: digital signals, sampling and quantization, complex numbers and phasors, complex functions, feedforward filters, feedback filters, frequency response and transfer functions, periodic signals and Fourier series, discrete Fourier transform and fast Fourier transform, comb and string filters, Z-transform and convolution.

Credits	**3**
Prerequisites	**MAT 200**

Notes

Credit may be received for MAT 320 or MAT 220 but not both.

MAT 321

This course continues to explore the mathematical foundations of digital signal processing, with applications to digital audio programming. Topics include: Review of digital signals, Z-transforms and convolution, filter types, applications of fast Fourier transform, switching signals on and off, windowing, spectrograms, aliasing, digital to analog conversion, Nyquist Theorem, filter design, Butterworth filters, reverb, and the phase vocoder.

Credits	**3**
Prerequisites	**MAT 320**

MAT 340

This course is an introduction to basic probability and statistics with an eye toward computer science and artificial intelligence. Basic topics from probability theory include sample spaces, random variables, continuous and discrete probability density functions, mean and variance, expectation, and conditional probability. Basic topics from statistics include binomial, Poisson, chi-square, and normal distributions; confidence intervals; and the Central Limit Theorem. Further topics may include fuzzy sets and fuzzy logic.

Credits	**3**
Prerequisites	**MAT 200 or MAT 230, MAT 258**

MAT 345

This course presents a variety of computational tools for modeling and understanding complex data and explores the data science lifecycle. Topics include manipulating data, exploratory data analysis, statistical inference, spam filters and naïve Bayes, neural networks, and machine learning algorithms such as linear regression, k-nearest neighbors, and k-means. The course will focus on both understanding the mathematics underlying the computational methods and gaining hands-on experience in the application of these techniques to real datasets.

Credits	**3**
Prerequisites	**MAT 140, MAT 258**

MAT 346

This course focuses on the conceptual understanding of a core set of practical and effective statistical methods for modeling and analyzing complex data, and applies them to solve real world problems. Topics include linear and logistic regression, linear models for classification, deep learning and neural networks, support vector machines and kernel methods, unsupervised methods, classification trees, boosting, and random forests.

Credits	**3**
Prerequisites	**MAT 250, MAT 340**

MAT 350

This course is a continuation of MAT 300 with topics taken from the theory and applications of curves and surfaces. The course treats some of the material from MAT 300 in more detail, like the mathematical foundations for non-uniform rational B-spline (NURBS) curves and surfaces, knot insertion, and subdivision. Other topics may include basic differential geometry of curves and surfaces, tensor product surfaces, and multivariate splines.

Credits	**3**
Prerequisites	**MAT 300**

MAT 351

This course gives an introduction to several mathematical topics of foundational importance to abstract algebra, and in particular the algebra of quaternions. Topics covered may include: operations, groups, rings, fields, vector spaces, algebras, complex numbers, quaternions, curves over the quaternionic space, interpolation techniques, splines, octonions, and Clifford algebras.

Credits	**3**
Prerequisites	**MAT 300**

MAT 352

This course presents the foundations of wavelets as a method of representing and approximating functions. It discusses background material in complex linear algebra and Fourier analysis. Basic material on the discrete and continuous wavelet transforms forms the core subject matter. This includes the Haar transform, and multi-resolution analysis. Other topics may include subdivision curves and surfaces, and B-spline wavelets. Applications to computer graphics may include image editing, compression, surface reconstruction from contours, and fast methods of solving 3D simulation problems.

Credits	**3**
Prerequisites	**MAT 250, MAT 258**

MAT 353

This course presents an introduction to differential geometry, with emphasis on curves and surfaces in three-space. It includes background material on the differentiability of multivariable functions. Topics covered include parameterized curves and surfaces in three-space and their associated first and second fundamental forms, Gaussian curvature, the Gauss map, and an introduction to the intrinsic geometry of surfaces. Other topics may include an introduction to differentiable manifolds, Riemannian geometry, and the curvature tensor.

Credits	**3**
Prerequisites	**MAT 300**

MAT 354

Topics covered in this course include convex hulls, triangulations, Art Gallery theorems, Voronoi diagrams, Delaunay graphs, Minkowski sums, path finding, arrangements, duality, and possibly randomized algorithms, time permitting. Throughout the course, students explore various data structures and algorithms. The analysis of these algorithms, focusing specifically on the mathematics that arises in their development and analysis is discussed. Although CS 330 is not a prerequisite, it is recommended.

Credits	**3**
Prerequisites	**MAT 250, MAT 258**

MAT 355

This course provides an introduction to the basic theorems and algorithms of graph theory. Topics include graph isomorphism, connectedness, Euler tours, Hamiltonian cycles, and matrix representation. Further topics may include spanning trees, coloring algorithms, planarity algorithms, and search algorithms. Applications may include network flows, graphical enumeration, and embedding of graphs in surfaces.

Credits	**3**
Prerequisites	**MAT 250, MAT 258**

MAT 356

This course covers the advanced theory and applications of ordinary differential equations. The first course in differential equations focused on basic prototypes, such as exact and separable equations and the second-degree harmonic oscillator equation. This course builds upon these ideas with a greater degree of generality and theory. Topics include qualitative theory, dynamical systems, calculus of variations, and applications to classical mechanics. Further topics may include chaotic systems and cellular automata. With this overview, students will be prepared to study the specific applications of differential equations to the modeling of problems in physics, engineering, and computer science.

Credits	**3**
Prerequisites	**MAT 250, MAT 256**

MAT 357

This course covers both the theoretical and practical study of numerical methods used in many areas of computer science, applied mathematics, science and engineering. Topics include: solutions of non-linear equations, interpolation, approximation of functions, quadrature rules, numerical solutions of ordinary differential equations, and numerical methods in linear algebra. Further topics may include Fourier series, wavelets, and stability theory.

Credits	**3**
Prerequisites	**MAT 250 or (MAT 140 and MAT 258)**

MAT 359

This course introduces computational algebra as a tool to study the geometry of curves and surfaces in affine and projective space. The central objects of study are affine varieties and polynomial ideals, and the algebra-geometry dictionary captures relations between these two objects. The precise methods of studying polynomial ideals make use of monomial orderings, Grobner bases, and the Buchberger algorithm. Students have opportunities to program parts of these algorithms and to use software packages to illustrate key concepts. Further topics may include resultants, Zariski closure of algebraic sets, intersections of curves and surfaces, and multivariate polynomial splines.

Credits	**3**
Prerequisites	MAT 300

MAT 361

This course is an introduction to elementary number theory and cryptography. Among the essential tools of number theory that are covered, are divisibility and congruence, Euler's function, Fermat's little theorem, Euler's formula, the Chinese remainder theorem, powers modulo m, kth roots modulo m, primitive roots and indices, and quadratic reciprocity. These tools are then used in cryptography, where the course discusses encryption schemes, the role of prime numbers, security and factorization, the DES algorithm, public key encryption, and various other topics, as time allows.

Credits	**3**
Prerequisites	MAT 250, MAT 258

MAT 362

This course introduces the basic theory of fuzzy sets and fuzzy logic and explores some of their applications. Topics covered include classical sets and their operations, fuzzy sets and their operations, membership functions, fuzzy relations, fuzzification/ defuzzification, classical logic, multi-valued logic, fuzzy logic, fuzzy reasoning, fuzzy arithmetic, classical groups, and fuzz groups. Students will also explore a number of applications, including approximate reasoning, fuzzy control, fuzzy behavior, and interaction in computer games.

Credits	**3**
Prerequisites	MAT 250, MAT 258

MAT 363

This course explores partial differential equations (PDEs) and fluid dynamics. Topics covered in this class include Fourier series, Fourier transforms, classification of PDEs, Poisson's equation, heat equation, wave equation, and introductory topics of fluid dynamics. Solution methods of initial and boundary value problems of various types will be investigated. Numerical methods, such as finite difference, finite volume, and finite element will be studied.

Credits	**3**
Prerequisites	MAT 220 **or** MAT 250 **or** MAT 256, MAT 200

MAT 364

Combinatorial Game Theory studies finite, two-player games in which there are no ties. Techniques from logic combinatorics and set theory are used to prove various properties of such games. Typical games include Domineering, Hackenbush, and Nim. The analysis of such games can also be used to study other more complex games like Dots and Boxes, and Go. Topics covered in this course include Conway's theory of numbers as games, impartial and partizan games, winning strategies, outcome classes and algebra of games.

Credits	**3**
Prerequisites	MAT 258

MAT 365

This course introduces topology and its applications. Topics covered include topological spaces, quotient and product spaces, metric and normed spaces, connectedness, compactness, and separation axioms. Further topics may include basic algebraic topology, fixed point theorems, theory of knots, and applications to kinematics, game theory, and computer graphics.

Credits	**3**
Prerequisites	MAT 250, MAT 258

MAT 366

This course covers the fundamental techniques and algorithms of counting. Topics include combinations, permutations, lists and strings, distributions, Stirling numbers, partitions, rearrangements and derangements, the principle of inclusion and exclusion, generating functions, and recursion. The course may include further topics such as the Polya-Redfield method, partially ordered sets, enumeration problems from graph theory, Ramsey's Theorem, block designs, codes, difference sets, finite geometries, Latin squares and Hadamard matrices.

Credits	**3**
Prerequisites	MAT 258

MAT 367

This course introduces the basic theory of fuzzy sets and fuzzy logic, fuzzy systems, neural networks and neuro-fuzzy systems. Topics in Fuzzy Systems include: fuzzy sets and their operations, membership functions, fuzzy systems of various types, fuzzy control, and fuzzy clustering. Topics in Artificial Neural Networks include: artificial neural networks, the backpropagation algorithm, deep learning, adaptive neuro-fuzzy inference systems. Additional topics may include parameter selection and regularization for neural networks, and convolutional neural networks.

Credits	**3**
Prerequisites	MAT 258

Notes

Credit may be received for one of MAT 362 and MAT 367, but not both

MAT 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**Permission of instructor required.**

MAT 400

This course introduces the foundations of real analysis by means of a rigorous reexamination of the topics covered in elementary calculus. The course starts with the topology of the real line and proceeds to a formal examination of limits, continuity, and differentiability. The course also covers the convergence of sequences and series of real numbers and the uniform convergence of sequences of real valued functions.

Credits	**3**
Prerequisites	MAT 250

MAT 410

A continuation of MAT 400, this course emphasizes the formal treatment of the theory of integration of functions of a real variable. It reexamines the Riemann integral and the Fundamental theorem of calculus as well as the theory of the Stieltjes and Lebesgue integral and their applications in probability and Fourier analysis. The course concludes with a discussion of the topology of R^n, and the differentiability and integrability of functions of several variables, including the theorems of Green and Stokes and the divergence theorem.

Credits	**3**
Prerequisites	MAT 400

MAT 450

This course provides an introduction to the foundations of abstract algebra. The fundamental objects of study are groups, rings, and fields. The student builds on previous courses in algebra, particularly linear algebra, with an even greater emphasis here on proofs. The study of groups is an ideal starting point, with few axioms but a rich landscape of examples and theorems, including matrix groups, homomorphism theorems, group actions, symmetry, and quotient groups. This course extends these ideas to the study of rings and fields. Topics in ring theory include polynomial rings and ideals in rings. The course also covers fields, their construction from rings, finite fields, basic theory of equations, and Galois theory.

Credits	**3**
Prerequisites	MAT 250, MAT 258

MAT 460

This course builds on the foundations established in MAT 450. It extends the fundamental objects of groups, rings, and fields to include modules over rings and algebras. The course gives the basic ideas of linear algebra a more rigorous treatment and extends scalars to elements in a commutative ring. In this context, students study the general theory of vector spaces and similarity of transformations. The curriculum also discusses non-commutative algebras and rings, emphasizing examples, such as quaternion algebras. Further topics may include non-associative rings and algebras, Galois theory, exact sequences, and homology.

Credits	**3**
Prerequisites	**MAT 400**

MAT 500

This course is an introduction to parameterized polynomial curves and surfaces with a view toward applications in computer graphics. It discusses both the algebraic and constructive aspects of these topics. Algebraic aspects include vector spaces of functions, special polynomial and piecewise polynomial bases, polynomial interpolation, and polar forms. Constructive aspects include the de Casteljau algorithm and the de Boor algorithm. Other topics may include an introduction to parametric surfaces and multivariate splines.

Credits	**3**
Prerequisites	**None**

MAT 550

This course is a continuation of MAT 300 with topics taken from the theory and applications of curves and surfaces. The course treats some of the material from MAT 300 in more detail, like the mathematical foundations for non-uniform rational B-spline (NURBS) curves and surfaces, knot insertion, and subdivision. Other topics may include basic differential geometry of curves and surfaces, tensor product surfaces, and multivariate splines.

Credits	**3**
Prerequisites	**MAT 300**

MAT 551

This course gives an introduction to several mathematical topics of foundational importance to abstract algebra, and in particular the algebra of quaternions. Topics covered may include: operations, groups, rings, fields, vector spaces, algebras, complex numbers, quaternions, curves over the quaternionic space, interpolation techniques, splines, octonions, and Clifford algebras.

Credits	**3**
Prerequisites	**MAT 500**

MAT 552

This course presents the foundations of wavelets as a method of representing and approximating functions. It discusses background material in complex linear algebra and Fourier analysis. Basic material on the discrete and continuous wavelet transforms forms the core subject matter. This includes the Haar transform, and multi-resolution analysis. Other topics may include subdivision curves and surfaces, and B-spline wavelets. Applications to computer graphics may include image editing, compression, surface reconstruction from contours, and fast methods of solving 3D simulation problems.

Credits	**3**
Prerequisites	**MAT 250**, **MAT 258**

MAT 553

This course presents an introduction to differential geometry, with emphasis on curves and surfaces in three-space. It includes background material on the differentiability of multivariable functions. Topics covered include parameterized curves and surfaces in three-space and their associated first and second fundamental forms, Gaussian curvature, the Gauss map, and an introduction to the intrinsic geometry of surfaces. Other topics may include an introduction to differentiable manifolds, Riemannian geometry, and the curvature tensor.

Credits	**3**
Prerequisites	**MAT 500**

MAT 554

Topics covered in this course include convex hulls, triangulations, Art Gallery theorems, Voronoi diagrams, Delaunay graphs, Minkowski sums, path finding, arrangements, duality, and possibly randomized algorithms, time permitting. Throughout the course, students explore various data structures and algorithms. The analysis of these algorithms, focusing specifically on the mathematics that arises in their development and analysis is discussed. Although CS 330 is not a prerequisite, it is recommended.

Credits	**3**
Prerequisites	**None**

MAT 555

This course provides an introduction to the basic theorems and algorithms of graph theory. Topics include graph isomorphism, connectedness, Euler tours, Hamiltonian cycles, and matrix representation. Further topics may include spanning trees, coloring algorithms, planarity algorithms, and search algorithms. Applications may include network flows, graphical enumeration, and embedding of graphs in surfaces.

Credits	**3**
Prerequisites	**MAT 250**, **MAT 258**

MAT 556

This course covers the advanced theory and applications of ordinary differential equations. The first course in differential equations focused on basic prototypes, such as exact and separable equations and the second-degree harmonic oscillator equation. This course builds upon these ideas with a greater degree of generality and theory. Topics include qualitative theory, dynamical systems, calculus of variations, and applications to classical mechanics. Further topics may include chaotic systems and cellular automata. With this overview, students will be prepared to study the specific applications of differential equations to the modeling of problems in physics, engineering, and computer science.

Credits	**3**
Prerequisites	**MAT 250**, **MAT 256**

MAT 557

This course covers both the theoretical and practical study of numerical methods used in many areas of computer science, applied mathematics, science and engineering. Topics include: solutions of non-linear equations, interpolation, approximation of functions, quadrature rules, numerical solutions of ordinary differential equations, and numerical methods in linear algebra. Further topics may include Fourier series, wavelets, and stability theory.

Credits	**3**
Prerequisites	**None**

MAT 559

This course introduces computational algebra as a tool to study the geometry of curves and surfaces in affine and projective space. The central objects of study are affine varieties and polynomial ideals, and the algebra-geometry dictionary captures relations between these two objects. The precise methods of studying polynomial ideals make use of monomial orderings, Grobner bases, and the Buchberger algorithm. Students have opportunities to program parts of these algorithms and to use software packages to illustrate key concepts. Further topics may include resultants, Zariski closure of algebraic sets, intersections of curves and surfaces, and multivariate polynomial splines.

Credits	**3**
Prerequisites	**MAT 300** or **MAT 500**

MAT 560

This course explores topics in linear algebra and abstract algebra. Topics in linear algebra include: vector spaces, transformations, canonical forms, and complex inner product spaces. Topics in abstract algebra include: introduction to abstract groups, rings, fields, and algebras. Further topics may include: modules, multivariate polynomials, algebraic varieties, tensor products, and duality.

Credits	**3**
Prerequisites	**None**

MAT 561

This course is an introduction to elementary number theory and cryptography. Among the essential tools of number theory that are covered are divisibility and congruence, Euler's function, Fermat's little theorem, Euler's formula, the Chinese remainder theorem, powers modulo m, kth roots modulo m, primitive roots and indices, and quadratic reciprocity. These tools are then used in cryptography, where the course discusses encryption schemes, the role of prime numbers, security and factorization, the DES algorithm, public key encryption, and various other topics, as time allows.

Credits	**3**
Prerequisites	**MAT 250**, **MAT 258**

MAT 562

This course introduces the basic theory of fuzzy sets and fuzzy logic and explores some of their applications. Topics covered include classical sets and their operations, fuzzy sets and their operations, membership functions, fuzzy relations, fuzzification/ defuzzification, classical logic, multi-valued logic, fuzzy logic, fuzzy reasoning, fuzzy arithmetic, classical groups, and fuzz groups. Students will also explore a number of applications, including approximate reasoning, fuzzy control, fuzzy behavior, and interaction in computer games.

Credits	**3**
Prerequisites	**MAT 250**, **MAT 258**

MAT 563

This course explores partial differential equations (PDEs) and fluid dynamics. Topics covered in this class include Fourier series, Fourier transforms, classification of PDEs, Poisson's equation, heat equation, wave equation, and introductory topics of fluid dynamics. Solution methods of initial and boundary value problems of various types will be investigated. Numerical methods, such as finite difference, finite volume, and finite element will be studied.

Credits	**3**
Prerequisites	**None**

MAT 564

Combinatorial Game Theory studies finite two-player games in which there are no ties. Techniques from logic, combinatorics, and set theory are used to prove various properties of such games. Typical games include Domineering, Hackenbush, and Nim. The analysis of such games can also be used to study other more complex games like Dots and Boxes, impartial and partisan games, winning strategies outcome classes, algebra of games.

Credits	**3**
Prerequisites	**MAT 258**

MAT 565

This course is an introduction to topology and its applications. Topics include: topological spaces, quotient and product spaces, metric and normed spaces, connectedness, compactness, and separation axioms. Further topics may include: basic algebraic topology, fixed point theorems, theory of knots, and applications to kinematics, game theory, and computer graphics.

Credits	**3**
Prerequisites	**MAT 250**, **MAT 258**

MAT 567

This course introduces the basic theory of fuzzy sets and fuzzy logic, fuzzy systems, neural networks and neuro-fuzzy systems. Topics in Fuzzy Systems include: fuzzy sets and their operations, membership functions, fuzzy systems of various types, fuzzy control, and fuzzy clustering. Topics in Artificial Neural Networks include: artificial neural networks, the backpropagation algorithm, deep learning, adaptive neuro-fuzzy inference systems. Additional topics may include parameter selection and regularization for neural networks, and convolutional neural networks.

Credits	**3**
Prerequisites	**None**

Notes

Credit may be received for one of MAT 562 and MAT 567, but not both

MAT 570

This course explores topics in mathematical analysis of real numbers and functions of real variables. Topics covered in this course include: real numbers, metric spaces, topology of metric spaces, the contraction principle, continuity of functions on metric spaces, differentiability of real-valued functions, sequences and series of functions, continuity and differentiability of functions of several variables, and Riemann integration. Additional topics may include Euclidean spaces, normed spaces, functions of bounded variation, and Riemann-Stieltjes integrals.

Credits	**3**
Prerequisites	**None**

MAT 571

This course explores topics in measure theory and functional analysis. The topics covered in this course include: Lebesgue measure, Lebesgue integration, normed spaces, Banach spaces, Fourier series and wavelets, and Hilbert spaces, together with their applications. Additional topics may include Hahn-Banach theorem, bounded linear operators on Hilbert spaces, Riesz representation theorem, Sobolev spaces, and self-adjoint operators.

Credits	**3**
Prerequisites	**MAT 570**

MAT 572

This course explores topics in complex analysis. Topics include: the complex number field and its geometry, complex functions, limits, complex differentiation, analytic functions, conformal mappings, contour integration, and Laurent series. Additional topics may include: Rouche's theorem, the maximum modulus theorem, Liouville's theorem, and applications.

Credits	**3**
Prerequisites	**None**

MAT 580

This course is a formal introduction to stochastic processes with applications. The main topics are discrete and continuous time Markov chains, Poisson processes, random walks, branching processes, first passage times, recurrence and transience, and stationary distributions. The course also covers Brownian motion and martingales. Other topics may include renewal processes, queues, optimal stopping theory, Monte Carlo methods, and stochastic integration.

Credits	**3**
Prerequisites	**None**

MAT 581

This course presents modern statistical concepts and methods developed in a mathematical framework. Topics include statistical inference, point and interval estimation, confidence intervals and hypothesis testing, sufficiency, Neyman-Pearson theory, maximum likelihood, Bayesian analysis, and large sample theory. Additional topics may include decision theory, linear models, and nonparametric statistics.

Credits	**3**
Prerequisites	**None**

MAT 599

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

Music

MUS 105

This course is an auditioned jazz ensemble for the study of jazz performance practice and the rehearsal of repertory in preparation for a public concert at the end of the semester.

Credits	**1**
Prerequisites	**Permission of instructor required.**

MUS 106

This course is a non-audition jazz workshop for the study of jazz performance practice. Rehearsals of repertory include instruction, demonstration, and exploration of jazz improvisation techniques.

Credits	**1**
Prerequisites	**Rudimentary knowledge of a musical instrument is required.**

MUS 107

This course consists of weekly chamber music coaching with a focus on learning basic concepts in chamber music including: cueing, intonation and voicing, expression, phrasing, interpretation, performance practice and style, stage presence, ensemble etiquette.

Credits	**1**
Prerequisites	**Permission of instructor is required. Email instructor to schedule audition.**

MUS 110

This course consists of private lessons on selected instruments, or voice. Topics vary.

Credits	**1**
Prerequisites	**None**

Notes

Entrance to the BA in Music and Sound Design degree program required.

MUS 111

This course consists of private lessons on an individual instrument, or voice. Topics vary.

Credits	**1**
Prerequisites	MUS 110

Notes

Entrance to the BA in Music and Sound Design degree program required.

MUS 112

This course is a non-auditioned mixed-voice chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**
Prerequisites	**None**

Notes

This course may be repeated for credit.

MUS 113

This course is a non-audition mixed chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**
Prerequisites	**None**

MUS 115

This course offers an introduction to the fundamentals of music and sound design, and an overview of the production of music and sound for animation, film, and video games. Topics include music notation, key, meter, rhythm, melody, harmony, texture, tempo, genre and form; historical musical styles; dialog and timing; and digital audio production methods and techniques.

Credits	**3**
Prerequisites	**None**

Notes

Credit may be received for MUS 115 or for FLM 275, but not for both.

MUS 118

This course is a small vocal ensemble workshop for the study of a advanced choral practice and the rehearsal of vocal repertory in preparation for a public concert at the end of the semester. Students participating in the Chamber Singers will also participate in the Dragon Chorus.

Credits	**1**
Prerequisites	MUS 112 **Permission of instructor required. Email instructor to schedule audition.**

MUS 120

This course offers an introduction to basic music theory and musicianship. Topics include pitch, intervals, scales, chord structure, keys, music notation, functional harmony, modes, simple analysis, sight singing, transcription, and ear training. Musical examples are drawn from various styles and periods.

Credits	**2**
Prerequisites	**None**
Corequisites	**MUS 120L**

MUS 120L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 120.

Credits	**1**
Prerequisites	**None**
Corequisites	**MUS 120**

MUS 121

This course is a continuation of MUS 120, offering further studies in basic music theory and musicianship. Topics include modal and diatonic harmony, triads and inversions, modulation, four-part writing, sight-singing, transcription, and ear training.

Credits	**2**
Prerequisites	**MUS 120**
Corequisites	**MUS 121L**

MUS 121L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 121.

Credits	**1**
Prerequisites	**MUS 120L**
Corequisites	**MUS 121**

MUS 130

This course is an introduction to the elements of music, including study of the staff, clefs, key signatures, scales, time signatures, notation, meter and rhythm, intervals, major and minor chords, form, instrumentation, musical styles, music history, application of theory at the keyboard, and rhythmic, melodic, and harmonic ear training.

Credits	**3**
Prerequisites	**None**

Notes

Students cannot receive credit for both MUS 130 and MUS 120 or MUS 120L

MUS 150

This course provides an introduction to digital audio recording, processing, and mixing. Students are introduced to software and hardware components of the digital audio workstation, including microphones, mixers, MIDI sequencing and multitrack recording software. Further topics include fundamentals of acoustics, recording, sound synthesis, and MIDI.

Credits	**2**
Prerequisites	**None**
Corequisites	**MUS 150L**

Notes

Credit may be received for MUS 150 or for MUS 115, but not for both.

MUS 150L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 150. Students will apply their knowledge and skills as sound designers and composers on one or more projects, including one game or animation project.

Credits	**2**
Prerequisites	**None**
Corequisites	**MUS 150**

MUS 151

This course is a continuation of MUS 150, exploring in more detail the concepts and techniques of audio recording, processing and mixing. Topics include: fundamentals of acoustics, recording, sound synthesis, and the MIDI language; microphones; mixers; MIDI sequencing; multi-track recording software.

Credits	**2**
Prerequisites	**MUS 150**
Corequisites	**MUS 151L**

MUS 151L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 151. Students will apply their knowledge and skills as sound designers and composers on one or more projects, including one game or animation project.

Credits	**2**
Prerequisites	**MUS 150L**
Corequisites	**MUS 151**

MUS 160

This course provides a survey of American Popular Music from the 19th Century to the current day. Topics may include the interaction of European American, African American, and Latin American traditions; the influence of mass media and technology; and the role of popular music as a symbol of identity.

Credits	**3**
Prerequisites	**None**

MUS 161

This course presents a survey of Western art music from the Middle Ages through the early 21st century. Representative compositions will be studied within their cultural contexts and compositional techniques.

Credits	**3**
Prerequisites	**None**

MUS 171

This course charts the evolution of video game music from the first synthesized bleeps and bloops of early games, through the rise and fall of the video arcade, to the nearly ubiquitous games/consoles found in most households, and the latest craze-causing games on mobile devices. This course is designed for students of any major; no prior music knowledge is required.

Credits	**3**
Prerequisites	**None**

MUS 210

This course consists of private lessons on an individual instrument, or voice. Topics vary.

Credits	**1**
Prerequisites	**MUS 111**

Notes
Entrance to the BA in Music and Sound Design degree program required.

MUS 211

This course consists of private lessons on an individual instrument, or voice. Topics vary.

Credits	**1**
Prerequisites	**MUS 210**

Notes
Entrance to the BA in Music and Sound Design degree program required.

MUS 212

This course is a non-audition mixed chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**
Prerequisites	**None**

MUS 213

This course is a non-audition mixed chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**
Prerequisites	**None**

MUS 220

This course explores topics in music theory, analysis, and ear-training, including diatonic harmony through secondary dominants and diminished sevenths, modulations to dominant and relative keys, and analysis of musical forms including binary, ternary, sonata-allegro, and variation technique.

Credits	**2**
Prerequisites	**MUS 121**
Corequisites	**MUS 220L**

MUS 220L

This lab offers students hands-on experience in musicianship, applying the concepts and techniques presented in MUS 220.

Credits	**1**
Prerequisites	**MUS 121**
Corequisites	**MUS 220**

MUS 221

This course is a continuation of MUS 220, offering further studies in music theory, chromatic harmony and modulation. Topics include: impressionism, atonality, set theory, serialism, and minimalism.

Credits	**2**
Prerequisites	**MUS 220**
Corequisites	**MUS 221L**

MUS 221L

This lab offers students hands-on experience in musicianship, applying the concepts and techniques presented in MUS 221.

Credits	**1**
Prerequisites	**MUS 220L**
Corequisites	**MUS 221**

MUS 230

This course introduces counterpoint as a compositional tool. Topics include: five species of counterpoint, and compositional practices of the Renaissance and Baroque eras.

Credits	**2**
Prerequisites	**MUS 121**

MUS 231

This course continues the study of composition using polyphony and counterpoint, expanding on the principles explored in MUS 230. Topics may include: historical development polyphony and counterpoint, fugue and related forms, use of counterpoint in classical, romantic and modern music.

Credits	**2**
Prerequisites	**MUS 230**

MUS 240

This course consists of a collaborative sound design project with a team of students working on a video game or animation. Evaluation of the contribution may come from faculty in several departments which oversee the team project.

Credits	**1**
Prerequisites	**MUS 150**

MUS 242

This course consists of a collaborative sound design project with a team of students working on a game, animation, or other project. Evaluation of the contribution may come from faculty in several departments which oversee the team project.

Credits	**2**
Prerequisites	**MUS 240**

MUS 250

This course builds on MUS 151, with further exploration of the concepts and techniques of music and sound design for animation and video games. Topics include: multi-track audio recording; processing and mixing, with emphasis on MIDI sequencing; scoring; the use of virtual instruments and software synthesizers for the creation of music and soundscapes.

Credits	**1**
Prerequisites	**MUS 151**, **MUS 151L**
Corequisites	**MUS 250L**

MUS 250L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 250. Students will apply their knowledge and skills as sound designers and composers on one or more projects, which may include work on a production team to provide sound and music for game and/or animation projects.

Credits	**2**
Prerequisites	**MUS 151L**
Corequisites	**MUS 250**

MUS 251

This course is a continuation of MUS 250, exploring in more detail the concepts and techniques of sound design for animation and video games. Emphasis is placed on MIDI sequencing and scoring, and the use of virtual instruments and software synthesizers for the creation of music and soundscapes.

Credits	**1**
Prerequisites	**MUS 250**
Corequisites	**MUS 251L**

MUS 251L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 251. Students will apply their knowledge and skills as sound designers and composers on one or more projects, which may include work on a production team to provide sound and music for game and/or animation projects.

Credits	**2**
Prerequisites	**MUS 250L**
Corequisites	**MUS 251**

MUS 260

This course presents a survey of Western music from the Middle Ages through the Classical period. Representative compositions will be studied within their cultural contexts through the development of methods for analysis of musical style.

Credits	**3**
Prerequisites	**MUS 121**

MUS 261

This course is a continuation of MUS 260, presenting a survey of Western music from the Romantic period through the 20th century and beyond. Representative compositions will be studied within their cultural contexts through further development of methods for analysis of musical style.

Credits	**3**
Prerequisites	**MUS 260**

MUS 280

This course centers on folk, popular, and traditional musical genres, particularly those of the non-Western cultures, examining both elements of musical style and features of society that influence music.

Credits	**3**
Prerequisites	**MUS 121**

MUS 290

This course provides instruction in composition for percussion instruments, including drum kit, Latin percussion, and orchestral percussion. Properties and performance techniques for various percussion instruments are explored through hands-on study of the instruments themselves. Principles of effective scoring for real and virtual percussion instruments are presented through a combination of study, listening, physical training, and composing.

Credits	**3**
Prerequisites	**MUS 221, MUS 221L, MUS 231**

MUS 310

This course consists of private lessons on an individual instrument, or voice. Topics vary.

Credits	**1**
Prerequisites	MUS 211

Notes
Entrance to the BA in Music and Sound Design degree program required.

MUS 311

This course consists of private lessons on an individual instrument, or voice. Topics vary.

Credits	**1**
Prerequisites	MUS 310

Notes
Entrance to the BA in Music and Sound Design degree program required.

MUS 312

This course is a non-audition mixed chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**
Prerequisites	**None**

MUS 313

This course is a non-audition mixed chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**
Prerequisites	**None**

MUS 315

This course consists of private lessons in music composition including both traditional and experimental styles. Emphasis is placed on developing an individual voice.

Credits	**1**
Prerequisites	MUS 211, MUS 221, MUS 221L, MUS 231 **Permission of instructor required.**

MUS 316

This course consists of private lessons in music composition including both traditional and experimental styles. Emphasis is placed on developing individual voice.

Credits	**1**
Prerequisites	MUS 315 **Permission of instructor required.**

MUS 320

This course explores the basics of conducting technique and instrumentation. Students will practice live conducting of small ensembles and also study the principles of conducting and instrumentation for full orchestra.

Credits	**2**
Prerequisites	MUS 221

MUS 321

This course introduces the principles of orchestration and arranging. Examples from classical through modern times will be explored and modeled in student compositions and arrangements.

Credits	**3**
Prerequisites	MUS 231

MUS 322

This course explores concepts and techniques for writing and producing dynamically interactive musical scores for video games. Topics include: the history of video game music, and methods for composing and prototyping adaptive musical scores.

Credits	**3**
Prerequisites	**MUS 251**

MUS 330

This course teaches the principles of creative composition through the process of composing in one's own style. Topics include: stimulating the musical imagination, current musical languages, analysis of contemporary scores, technical exercises, techniques for starting a composition, and approaches to composing for instruments and voices.

Credits	**3**
Prerequisites	**MUS 231**

MUS 331

This course develops the principles and techniques of creative composition presented in MUS 330, with a focus on original composition in various styles. Emphasis is on analysis and practice of compositional methods and techniques through a series of case studies, each focusing on a specific historical musical style.

Credits	**3**
Prerequisites	**MUS 330**

MUS 340

This course consists of a collaborative sound design project with a team of students working on a video game or animation. Evaluation of the contribution may come from faculty in several departments which oversee the team project.

Credits	**1**
Prerequisites	**MUS 242**

MUS 342

This course consists of a collaborative sound design project with a team of students working on a game, animation, or other project. Evaluation of the contribution may come from faculty in several departments which oversee the team project.

Credits	**2**
Prerequisites	**MUS 340**

MUS 350

This course builds on MUS 251, with further exploration of music and sound design for animation and video games. Emphasis is placed on recording, editing, mixing and mastering for voice, acoustic and electric solo instruments, and ensembles.

Credits	**1**
Prerequisites	**MUS 251**
Corequisites	**MUS 350L**

MUS 350L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 350. Students will apply their knowledge and skills as sound designers and composers on one or more projects, which may include work on a production team to provide sound and music for game and/or animation projects.

Credits	**2**
Prerequisites	**MUS 251L**
Corequisites	**MUS 350**

MUS 351

This course builds on MUS 350, with further exploration of music and sound design for animation and video games. Topics include: foley recording; use of sound effects libraries; advanced editing and processing techniques for soundscape production.

Credits	**1**
Prerequisites	**MUS 350**
Corequisites	**MUS 351L**

MUS 351L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 351. Students will apply their knowledge and skills as sound designers and composers on one or more projects, which may include work on a production team to provide sound and music for game and/or animation projects.

Credits	**2**
Prerequisites	**MUS 350L**
Corequisites	**MUS 351**

MUS 370

This course is the first of a two-semester lecture and lab sequence providing instruction and practice in the tools and techniques for the recording, editing and implementation of music, sound and voice for video games. This course focuses on the desktop digital audio workstation for the production of music and audio assets. Topics include principles of digital audio, nonlinear sound design, synthesis, MIDI sequencing, and desktop audio recording.

Credits	**1**
Prerequisites	**GAM 250**
Corequisites	**MUS 120**, **MUS 120L**, **MUS 370L**

Notes

Credit may be received for either MUS 150 or MUS 370, but not both.

MUS 370L

This lab offers students hands-on experience in producing music and sound using a desktop digital audio workstation, applying the concepts and techniques presented in MUS 370. Students are required to apply knowledge and skills to produce original content and to implement it in a game project.

Credits	**2**
Prerequisites	**GAM 250**
Corequisites	**MUS 120**, **MUS 120L**, **MUS 370**

Notes

Students may not receive credit for both MUS 150L and MUS 370L

MUS 371

This course focuses on the principles and operation of a multitrack digital recording studio while continuing to work with tools introduced in MUS 370. Topics include microphone techniques, tracking, mixing, mastering, foley, and field recording. This course is the second of a two-semester lecture and lab sequence providing instruction and practice in the tools and techniques for the recording, editing, and implementation of music, sound, and voice for video games.

Credits	**1**
Prerequisites	**MUS 370**, **MUS 370L**
Corequisites	**MUS 371L**

MUS 371L

This lab offers students hands-on experience in producing music, sound effects, and voice recordings in a multitrack digital recording studio, applying the concepts and techniques presented in MUS 371. Students are required to apply their knowledge and skills as sound designers and composers on one or more game projects.

Credits	**2**
Prerequisites	**MUS 370**, **MUS 370L**
Corequisites	**MUS 371**

MUS 390

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**3**
Prerequisites	**MUS 350**

MUS 399

This course can cover topics which are of interest to faculty and students and may vary from semester to semester.

Credits	**3**
Prerequisites	**None**

MUS 410

This course consists of private lessons on an individual instrument, or voice. Topics vary.

Credits	**1**
Prerequisites	**MUS 311**

Notes
Entrance to the BA in Music and Sound Design degree program required.

MUS 411

This course consists of private lessons on an individual instrument, or voice. Topics vary.

Credits	**1**
Prerequisites	**MUS 410**

Notes
Entrance to the BA in Music and Sound Design degree program required.

MUS 412

This course is a non-audition mixed chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**
Prerequisites	**None**

MUS 413

This course is a non-audition mixed chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**
Prerequisites	**None**

MUS 415

This course consists of private lessons in advanced music composition. Emphasis is placed on mastery of advanced techniques of composition in one particular area, such as electroacoustic music, algorithmic composition, film scoring, or adaptive music for video games.

Credits	**1**
Prerequisites	**MUS 316** **Permission of instructor required.**

MUS 416

This course is a continuation of MUS 415, and consists of private lessons in advanced music composition. Emphasis is placed on production of a larger work.

Credits	**1**
Prerequisites	**MUS 415** **Permission of instructor required.**

MUS 450

This course builds on MUS 351, with further exploration of music and sound design for animation and video games. Emphasis is placed on production of adaptive music and sound for video games.

Credits	**1**
Prerequisites	**MUS 351**
Corequisites	**MUS 450L**

MUS 450L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 450. Students will apply their knowledge and skills as sound designers and composers on one or more projects, which may include work on a production team to provide sound and music for game and/or animation projects.

Credits	**2**
Prerequisites	**MUS 351L**
Corequisites	**MUS 450**

MUS 451

This course builds on MUS 450, with further exploration of music and sound design for animation and video games. Advanced topics will vary in accordance with specifications of students' final projects.

Credits	**1**
Prerequisites	MUS 450
Corequisites	MUS 451L

MUS 451L

This lab offers students hands-on experience in a project studio, applying the concepts and techniques presented in MUS 451. Students will apply their knowledge and skills as sound designers and composers on one or more projects, which may include work on a production team to provide sound and music for game and/or animation projects.

Credits	**2**
Prerequisites	MUS 450L
Corequisites	MUS 451

MUS 470

This course explores advanced topics in audio design and implementation. Lectures address issues that come up in audio programming at several levels: low level algorithms, midlevel components such as plugins and graphs, and high-level programming such as user interfaces and interactive music. Lecture topics include audio engine design and implementation, spatial audio, and digital signal processing.

Credits	**1**
Prerequisites	CS 246, MAT 321, MUS 371, MUS 371L
Corequisites	MUS 470L

MUS 470L

This course presents a guided lab environment to pursue project work in audio design and imple- mentation. Particular topics and project work include: parametrized audio components with user interfaces, audio-plugin development, and audio algorithm implementation.

Credits	**2**
Prerequisites	CS 246, MAT 321, MUS 371, MUS 371L
Corequisites	MUS 470

MUS 471

This course continues to explore advanced topics in audio design and implementation. Lectures address issues that come up in audio programming at several levels: low level algorithms, mid-level components such as plugins and graphs, and high-level programming such as user interfaces and interactive music. Lecture topics include: audio engine design and implementation, spatial audio, and digital signal processing.

Credits	**1**
Prerequisites	MUS 470, MUS 470L
Corequisites	MUS 471L

MUS 471L

This course continues to present a guided lab environment to pursue project work in audio design and implementation. Particular topics and project work include: parametrized audio components with user interfaces, audio-plugin development, and audio algorithm implementation.

Credits	**2**
Prerequisites	MUS 470, MUS 470L
Corequisites	MUS 471

MUS 490

An internship is any carefully monitored work or service experience in which an individual has intentional learning goals and reflects actively on what she or he is learning throughout the experience. It is usually a professional activity under general supervision of an experienced professional and in a job situation, which places a high degree of responsibility on the student.

Credits	**3**
Prerequisites	**MUS 350**

MUS 1300

This course is a non-auditioned mixed-voice chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**

MUS 1301

This course is a non-auditioned mixed-voice chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**

MUS 1302

This course is a non-auditioned mixed-voice chorus providing training in vocal technique and musicianship. The class performs in concert at the end of each semester.

Credits	**1**

MUS 1310

This course consists of rehearsals of the DigiPen Chamber Singers, an auditioned choir, in preparation for performance(s) at the end of the semester.

Credits	**1**

Notes

Permission of instructor required. Completion of any course in this series allows entrance in any other.

MUS 1311

This course consists of rehearsals of the DigiPen Chamber Singers, an auditioned choir, in preparation for performance(s) at the end of the semester.

Credits	**1**

Notes

Permission of instructor required. Completion of any course in this series allows entrance in any other.

MUS 1312

This course consists of rehearsals of the DigiPen Chamber Singers, an auditioned choir, in preparation for performance(s) at the end of the semester.

Credits	**1**

Notes

Permission of instructor required. Completion of any course in this series allows entrance in any other.

MUS 1320

This course is an auditioned jazz ensemble for the study of jazz performance practice and the rehearsal of repertory in preparation for a public concert at the end of the semester.

Credits	**1**

Notes

Permission of instructor required. Completion of any course in this series allows entrance in any other.

MUS 1321

This course is an auditioned jazz ensemble for the study of jazz performance practice and the rehearsal of repertory in preparation for a public concert at the end of the semester.

Credits	**1**

Notes

Permission of instructor required. Completion of any course in this series allows entrance in any other.

MUS 1330

This course is a non-audition jazz workshop for the study of jazz performance practice. Rehearsals of repertory include instruction, demonstration, and exploration of jazz improvisation techniques.

Credits	**1**

Notes
Rudimentary knowledge of a musical instrument is required.

MUS 1331

This course is a non-audition jazz workshop for the study of jazz performance practice. Rehearsals of repertory include instruction, demonstration, and exploration of jazz improvisation techniques.

Credits	**1**

Notes
Rudimentary knowledge of a musical instrument is required.

MUS 1332

This course is an auditioned jazz ensemble for the study of jazz performance practice and the rehearsal of repertory in preparation for a public concert at the end of the semester.

Credits	**1**

Notes
Permission of instructor required. Completion of any course in this series allows entrance in any other.

MUS 1332

This course is a non-audition jazz workshop for the study of jazz performance practice. Rehearsals of repertory include instruction, demonstration, and exploration of jazz improvisation techniques.

Credits	**1**

Notes
Rudimentary knowledge of a music instrument is required.

MUS 1340

This course consists of weekly chamber music coaching with a focus on learning basic concepts in chamber music including: cueing, intonation and voicing, expression, phrasing, interpretation, performance practice and style, stage presence, ensemble etiquette

Credits	**1**

Notes
Permission of instructor required. Email instructor to schedule audition. Completion of any course in this series allows entrance in any other.

MUS 1341

This course consists of weekly chamber music coaching with a focus on learning basic concepts in chamber music including: cueing, intonation and voicing, expression, phrasing, interpretation, performance practice and style, stage presence, ensemble etiquette.

Credits	**1**

Notes
Permission of instructor is required. Email instructor to schedule audition. Completion of any course in this series allows entrance in any other.

MUS 1342

This course consists of weekly chamber music coaching with a focus on learning basic concepts in chamber music including: cueing, intonation and voicing, expression, phrasing, interpretation, performance practice and style, stage presence, ensemble etiquette.

Credits	**1**

Notes
Permission of instructor is required. Email instructor to schedule audition. Completion of any course in this series allows entrance in any other.

Philosophy

PHL 150

This course introduces some of the basic philosophical issues and questions related to everyday life. Topics include human nature (self, mind, consciousness, and freedom), values (ethics, morality, and aesthetics), knowledge (reasoning, rationality, and truth), philosophy of science (universe and origins of life), philosophical positions (naturalism, idealism, realism, pragmatism, and existentialism), and philosophy of religion (god(s) and religion). Students apply these concepts to the philosophical issues related to games and video games, specifically definitional issues, philosophical themes in games, and art in games, among others.

Credits	**3**
Prerequisites	**ENG 110**

PHL 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**Permission of instructor required.**

Physics

PHY 115

We live in a world governed by physical laws. As a result we have become accustomed to objects' motions being in accordance with these laws. This course examines the basic physics and mathematics governing natural phenomena, such as light, weight, inertia, friction, momentum, and thrust as a practical introduction to applied math and physics. Students explore geometry, trigonometry for cyclical motions, and physical equations of motion for bodies moving under the influence of forces. With these tools, students develop a broader understanding of the impact of mathematics and physics on their daily lives.

Credits	**3**
Prerequisites	**None**

PHY 116

This is an algebra based physics course that builds upon basic mechanics to examine the physics of music and sound, including interactions with human sensation and perception.

Credits	**3**
Prerequisites	**PHY 115**

PHY 200

This calculus-based course presents the fundamental principles of mechanics, including kinematics, Newtonian dynamics, work and energy, momentum, and rotational motion.

Credits	**4**
Prerequisites	**MAT 150 or MAT 180**

PHY 200L

This course presents the concepts of PHY 200 in the laboratory. The experiments allow the student to experience the laws of basic physics involving linear motion, force, gravitation, conservation of energy, conservation of momentum, collisions, rotational motion, and springs. Error analysis and data reduction techniques are taught and required in experimental reports.

Credits	**1**
Prerequisites	**None**
Corequisites	**PHY 200**

PHY 250

This calculus-based course presents the fundamentals of fluid dynamics, oscillations, waves, geometric optics, and thermodynamics.

Credits	**4**
Prerequisites	**MAT 200 or MAT 230, PHY 200**

PHY 250L

This course presents the concepts of PHY 250 in the laboratory. The experiments allow students to experience the physical laws involving oscillations, waves, sound, interference, lift, drag, heat, optics, and entropy. Extended error analysis and statistics are taught and required in experimental reports.

Credits	**1**
Prerequisites	**None**
Corequisites	**PHY 250**

PHY 270

This calculus-based course presents the basic concepts of electromagnetism, including electric fields, magnetic fields, electromagnetic forces, DC and AC circuits, and Maxwell's equations.

Credits	**3**
Prerequisites	**PHY 250**

PHY 270L

This course presents the concepts of PHY 270 in the laboratory. The experiments allow students to experience the physical laws involving electric fields, electric potential, electric current, electric charge, capacitance, current, resistance, inductance, circuits, and magnetism. Error analysis and statistics are taught and required in experimental reports.

Credits	**1**
Prerequisites	**None**
Corequisites	**PHY 270**

PHY 290

The wake of modern physics has given rise to massive technological advancements that have changed our daily lives. This course covers many of the modern issues within the field, with an emphasis placed on the problem-solving nature of physics. The class is a calculus-based scientific examination of topics from general relativity and quantum mechanics through nuclear physics, high energy physics and astrophysics.

Credits	**3**
Prerequisites	**MAT 200 or MAT 230, PHY 250 or PHY 270, PHY 200**

PHY 300

This course covers the physics behind more complex mechanical interactions as well as the numerical techniques required to approximate the systems for simulations. A thorough analysis of mechanical systems through energy analysis provides the basis for the understanding of linear and rotational systems. The combination of theoretical physics and numerical methods provide students with the background for simulating physical systems with limited computational power. Topics covered include Lagrangian Dynamics, Hamilton's Equations, dynamics of rigid bodies, motion in non-inertial reference frames, the use of the inertia tensor, collision resolution, and numerical techniques including methods of approximation.

Credits	**3**
Prerequisites	**MAT 200 or MAT 230, CS 250, MAT 250, PHY 250**

PHY 320

This course uses fundamental physics to explore topics related to sound and vibration. The simple harmonic oscillator and the generic wave equation will be used to derive acoustic wave equations in three dimensions. Solutions to the acoustic wave equations will be explored.

Credits	**3**
Prerequisites	**PHY 250**

PHY 321

This course uses the tools of physics to explore sound generation, propagation, and detection. Particular attention is given to methods used by humans in each of these areas.

Credits	**3**
Prerequisites	**PHY 320**

PHY 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**Permission of instructor required.**

PHY 500

This class covers the topics in dynamics modeling techniques, including methods in the calculus of variations, Hamilton's principle, Lagrangian dynamics, Hamiltonian dynamics, motion in a non-inertial reference frame, dynamics of rigid bodies (moments of inertia, inertia tensor, and stability), collision resolution (impact parameters, scattering, and restitution), and physics of continuous bodies (elasticity, deformation, stress, and strain).

Credits	**3**
Prerequisites	**None**

PHY 599

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty or students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**None**

Projects

PRJ 101

This course investigates production pipelines adopted by schools and companies. Topics include career opportunities, best practices and methodologies, efficient workflows, and basic navigation of common industry software. Projects range from small individual assignments to a limited team-based project within a game engine.

Credits	**3**
Prerequisites	**ART 101**, **ART 125**, **ANI 101**

PRJ 201

This course is the first semester of a two-semester project series, continued in PRJ 251. This course focuses on the pipeline and processes for creating a 2D animation project. Topics explored include techniques for working effectively on a team, cinematic production tools, visual storytelling, and best practices for preproduction, production pipeline management, and project management.

Credits	**4**
Prerequisites	**PRJ 101**

Notes

Credit may be received for either PRJ 201 or PRJ 202, not both.

PRJ 202

This course is the first semester of a two-semester team project sequence, which is continued in PRJ 252. It focuses on discipline-specific processes and logic for working in a Real-Time engine and the fundamentals of team forming and team dynamics. Topics include collaboration and communication, project management, source control, and art integration into a Real-Time game engine.

Credits	**4**
Prerequisites	**PRJ 101**

PRJ 251

This course is the second semester of a two-semester series, continued from PRJ 201. This course focuses on the preproduction and production phase of a 2D animation project. Techniques are explored for production best practices, team dynamics, and project management.

Credits	**4**
Prerequisites	**PRJ 201 or PRJ 202**

Notes

Credit maybe received for either PRJ 251 or PRJ 252, not both

PRJ 252

This course is the second semester of a two-semester, multidisciplinary, team project sequence. It focuses on discipline-specific processes and logic for working in a Real-Time engine and the fundamentals of team forming and team dynamics. The projects extend the fundamental understanding gained in PRJ 202 and build upon them through iteration and increased complexity. Topics include collaboration and communication, project management, and the integration of art and design principles into a Real-Time game engine.

Credits	**4**
Prerequisites	**PRJ 202**

PRJ 300

This course is the first semester of a three-semester project which will be continued in PRJ 350 and PRJ 400. It supports multidisciplinary teams in the preproduction of an animated cinematic project with a focus on the application of discipline-based skills. Advanced techniques are applied including best practices of workflow in cinematic production, creating positive team dynamics, project management, cross-discipline integration, and iterative story development from concept to animatic.

Credits	**4**
Prerequisites	**CG 275**, **PRJ 251** **OR** **PRJ 252**

Notes

Credit may be received for PRJ 300 or PRJ 302, but not for both.

PRJ 302

This course is the first semester of a two-semester project which will be continued in PRJ 352. It supports multidisciplinary team projects in the preproduction of a game project with a focus on the application of discipline-based skills. Topics include project and pipeline management, creating positive team dynamics, cross-discipline integration, and best practices of product development cycle in game production.

Credits	**4**
Prerequisites	**CG 275**, **PRJ 251** **OR** **PRJ 252**

Notes

Credit may be received for PRJ 300 or PRJ 302, but not for both.

PRJ 350

This course is the second semester of a three-semester project which began at PRJ 300 and is to be continued in PRJ 400. Preproduction of an animated cinematic film is completed and production begins with a focus on applying discipline-based skills within project teams. Advanced techniques are applied including best practices of cinematic production workflow, creating positive team dynamics, project management, cross-discipline integration, iterative story development and developing animation art assets.

Credits	**4**
Prerequisites	**PRJ 300**, **OR** **PRJ 302**

Notes

Credit may be received for PRJ 350 or PRJ 352, but not for both.

PRJ 352

This course is the continuation of a two-semester project which began with PRJ 302. The course enters the production stage of the multidisciplinary team project with a focus on the application of discipline-based skills. Topics include best practices of discipline-specific workflows for game production, positive team dynamics, project management, cross-discipline integration, and playtesting.

Credits	**4**
Prerequisites	**PRJ 300** **OR** **PRJ 302**

Notes

Credit may be received for PRJ 350 or PRJ 352, but not for both.

PRJ 400

This course is the final semester of a three-semester project which began in PRJ 300 and continued through PRJ 350. It focuses on the completed production of an animated cinematic film through the application of discipline-based skills. Emphasis is placed on best practices of workflow in cinematic production, team collaboration, project management, cross-discipline integration, editing and quality control.

Credits	**4**
Prerequisites	**PRJ 350**, **OR** **PRJ 352**

Notes

Credit may be received for PRJ 400 or PRJ 402, but not for both.

PRJ 402

This course is the second semester of a two-semester team production of a game. Topics include advanced art pipeline, game engine rendering, visual appeal and consistency, user interface design, animation polish, and advanced testing techniques.

Credits	**4**
Prerequisites	**PRJ 352**

PRJ 450

This course focuses on building portfolios and reels in preparation for the professional world. Emphasis is placed on professional practices, methodologies, and presentation.

Credits	**4**
Prerequisites	**PRJ 400 or PRJ 402 or INT 390**

PRJ 510

This course consists of the production of art for a team project, starting with the creation of a production schedule and culminating with the delivery of various art assets. Coordination may occur with team members in other courses.

Credits	**3**
Prerequisites	**CG 501 and CG 525**

PRJ 601

This course explores digital art production. A selection of existing projects is analyzed and special attention is paid to recognizing innovation and the trajectory of creative and technical developments. Research is conducted to examine the artistic influences and required technical background for digital art production.

Credits	**3**
Prerequisites	**None**

PRJ 602

This course focuses on artistic concept, pre-production, and asset creation. Story elements are realized in a visual form. Topics include project management and effective presentations.

Credits	**3**
Prerequisites	**PRJ 601**

PRJ 1000

This course introduces team projects. The focus is on learning and understanding discipline-specific skills, best practices, team dynamics, and project management. Additional topics include production process tools and software.

Credits	**3**
Prerequisites	**None**

PRJ 2000

This course is the first semester of a two-semester multidisciplinary team project which is continued in PRJ 2050. This course focuses on discipline-specific processes of the preproduction phase of a game project. Topics include team formation, collaboration and communication, preproduction and production processes, and project management

Credits	**4**
Prerequisites	**PRJ 1000**

PRJ 2001

This course is the first semester of a two-semester project series, continued in PRJ 2051. This course focuses on the pipeline and processes for creating a 3D animated cinematic using a game engine. Topics explored include techniques for working effectively on a team, cinematic production tools, visual storytelling, and best practices for preproduction, production pipeline management, and project management.

Credits	**4**
Prerequisites	**PRJ 1000**

PRJ 2050

This course is the second semester of a two-semester multidisciplinary team project, continued from PRJ 2000. This course focuses on discipline-specific processes of the production

Credits	**4**
Prerequisites	**PRJ 2000 OR PRJ 2001**

PRJ 2051

This course is the second semester of a two-semester series, continued from PRJ 2001. This course focuses on the production phase of a 3D animated cinematic project in a game engine while applying discipline-based skills. Techniques are explored for production best practices, team dynamics, and project management.

Credits	**4**
Prerequisites	**PRJ 2001 OR PRJ 2000**

PRJ 3000

This course is an advanced team project. This course supports mixed-discipline team projects in preproduction, production, or post-production with a focus on the application of discipline-based skills. Project and pipeline management techniques will be applied, including team dynamics, cross-discipline integration, and best practices of the product development cycle in game production.

Credits	**4**
Prerequisites	**PRJ 2050 OR PRJ 2051, AND ART 2050**

PRJ 3001

This course is the first semester of the three-semester advanced team cinematic project. This course supports mixed-discipline team projects in preproduction, production, or post-production of an animated cinematic film with a focus on the application of discipline-based skills. Advanced techniques are applied including best practices of discipline- specific workflow in cinematic production, practices to create positive team dynamics, project management, cross-discipline integration, and iterative story development from concept to final film.

Credits	**4**
Prerequisites	**PRJ 2050 OR PRJ 2051, AND CG 2000 OR CG 2001 OR ANI 2000**

PRJ 3050

This course is the second semester of the three-semester advanced team game project. This course supports mixed-discipline team projects in preproduction, production, or post-production with a focus on the application of discipline-based skills. Project and pipeline management techniques will be applied, including team dynamics, cross-discipline integration, and best practices of the product development cycle in game production.

Credits	**4**
Prerequisites	**PRJ 3000**

PRJ 3051

This course is the second semester of the three-semester advanced team cinematic project continued from PRJ 3001. This course supports mixed-discipline team projects in preproduction, production, or post-production of an animated cinematic film with a focus on the application of discipline-based skills. Advanced techniques are applied including best practices of discipline-specific workflow in cinematic production, practices to create positive team dynamics, project management, cross-discipline integration, and iterative story development from concept to final film.

Credits	**4**
Prerequisites	**PRJ 3001**

PRJ 3075

This course is the third semester of the three-semester advanced team game project. This course supports mixed-discipline team projects in production or post-production with a focus on the application of discipline-based skills. Project and pipeline management techniques will be applied, including team dynamics, cross-discipline integration, and best practices of the product development cycle in game production.

Credits	**4**
Prerequisites	**PRJ 3050 or PRJ 3051**

PRJ 3076

This course is the final semester of the three-semester advanced team cinematic project continuing from PRJ 3051. It focuses on the completion of an animated cinematic film through the application of discipline-based skills. Advanced techniques are applied including best practices of workflow in cinematic production, practices to create positive team dynamics, project management, cross-discipline integration, editing and quality control.

Credits	**4**
Prerequisites	**PRJ 3051 or PRJ 3050**

PRJ 4000

This course provides a framework for improving and polishing digital art assets and animation in the game team projects completed in previous semesters. Emphasis is placed on preparing work for public display or audience interaction. Topics include assets optimization, playtesting, quality control, UI refinements and publishing requirements.

Credits	**3**
Prerequisites	**PRJ 3075 or PRJ 3076 or INT 390 or INT 450**

PRJ 4001

This course provides a framework for improving and polishing digital art assets and animation for the final phase of the cinematic team project from PRJ 3001. Emphasis is placed on preparing work for public display or audience interaction. Topics include quality control, art assets pipeline management, technical challenges, emergent tools, visual effects, light, audio integration, compositing, and rendering.

Credits	**3**
Prerequisites	**12 credits of PRJ 3000, or PRJ 3001 or INT 390 or INT 450**

PRJ 6001

This course conducts a survey of a wide variety of digital arts topics, providing an overview of each topic's relevant processes, tools, and techniques. Topics include the history, current state, and trajectory of digital arts topics.

Credits	**3**
Prerequisites	**None**

PRJ 6002

This course engages teams in the development of artistic concept, pre-production, and 2D and 3D asset creation, where narrative elements are realized in a visual form. Project and pipeline management techniques will be applied, including team dynamics and effective presentations.

Credits	**3**
Prerequisites	**CG 5002, ART 5540 OR ART 6500**

PRJ 7000

This course facilitates the research, development, and refinement of a proposal for an MFA thesis topic. Topics include idea formation, research, production planning, project timelines, scoping, and milestones.

Credits	**3**
Prerequisites	**ART 5001**

PRJ 7001

This course facilitates work on an approved thesis project under the guidance of its thesis committee.

Credits	**6**
Prerequisites	**PRJ 7000** **Permission of instructor required.**

PRJ 7002

This course facilitates work on an approved thesis project under the guidance of its thesis committee.

Credits	**6**
Prerequisites	**PRJ 7001**

Psychology

PSY 101

This course provides an overview of the field of psychology, including the major theories, principles, and methodologies of psychology. The course surveys the major subfields of psychology, including biological, cognitive, developmental, social, and clinical. Major topics include the brain, consciousness, sensation and perception, learning, motivation, memory, cognition, human development, personality, psychopathology, and the social bases of behavior.

Credits	**3**
Prerequisites	**None**

PSY 201

This course emphasizes emergent research and theory exploring the nature of human mental processes. Topics include neuroscience, attention, perception, memory, creativity, decision making, and information processing.

Credits	**3**
Prerequisites	PSY 101

PSY 207

This course introduces the use of univariate statistics for research with human participants. It covers descriptive and inferential statistics. Topics include central tendency, variability, and probability, as well as various inferential null-hypothesis testing techniques such as t-tests, analysis of variance, post-hoc tests, correlations, regression, and non-parametric statistics.

Credits	**3**
Prerequisites	PSY 101

PSY 209

This course introduces major topics exploring research procedures and methodology in the behavioral and social sciences. Major topics include principles of the scientific method, fundamental research concepts, terminology, critical evaluation of methodological issues, and best practices for designing psychological testing and research. Differences in qualitative and quantitative methodology, types of data collection, user experiences and design, and reporting results are also explored. Other topics include research ethics and best practices for data management and presentation.

Credits	**3**
Prerequisites	PSY 101

PSY 211

This course emphasizes emergent research and theory exploring the nature of human mental processes. Topics include neuroscience, attention, perception, memory, creativity, decision making, and information processing.

Credits	**3**
Prerequisites	PSY 101

Notes

This course is equivalent to PSY 201

PSY 221

This course will provide an overview of research and theory in social psychology by focusing on concepts including mental processing, attitude formation and change, conflict and aggression, persuasion, and socio-behavioral influences.

Credits	**3**
Prerequisites	PSY 101

PSY 231

This course covers natural human development from conception to early adulthood. The course emphasizes a cultural approach to understanding human biological, psychological, and social development during prenatal, infant, childhood, and adolescent periods.

Credits	**3**
Prerequisites	PSY 101

PSY 271

This course introduces the process of the construction and validation of standardized psychological measures. Topics include how to develop and evaluate individual questions or statements, types of and ways of evaluating test reliability and validity, and factor analysis. Emphasis is placed on practical application.

Credits	**3**
Prerequisites	PSY 207 **OR** PSY 209

PSY 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**Permission of instructor required.**

Social Sciences

SOS 115

This course guides students in the ethical assessment of both the processes and outcomes of social decision-making. After an introduction to basic ethical theories, students acquire an understanding of the structure of social institutions and the process through which one makes social choices. Central to the analysis is a study of ethics as a criterion for assessment of social decision-making with emphasis on the study of particular issues of social choice. The course also provides a theoretical framework within which to spot and analyze ethical issues in the media.

Credits	**3**
Prerequisites	**None**

SOS 150

This course draws on techniques and perspectives from the social sciences, humanities, and cultural studies to explore technology and change in the modern era. In particular, students examine how technology influences and is influenced by values and cultures in America and abroad. The course helps students recognize the range of consequences that technology in general, and information and communication technology (ICT) in particular, have when shaped and used by individuals, organizations, and society. Through readings, discussion, lectures, and written assignments, students become acquainted with current controversies related to the socio-cultural dimensions of technology in the "digital era." While the course examines the impact of technologies—including video gaming and robotics—on the contemporary world, it also uses an historical approach to address some of the technological innovations that have most affected U.S. society in the past. The course considers how technologies are developed and sustained, and how they interact with and affect our urban culture. Specific themes likely to be addressed include technology's impact on the private and public spheres; the body and the self in cyberspace; and the criteria used to determine a technology's success, failure, and danger.

Credits	**3**
Prerequisites	**None**

SOS 180

This course takes a close look at current debates on race, gender, and ethnicity in American society. It begins with an overview of definitions of race, gender, and ethnicity, exploring what they have meant in the past and what they mean now. Then the course examines the intersections between race, gender, and ethnicity, asking the following questions: How do race and ethnicity differ, and how are they related? What difference does race make? How are race and gender related? Where does sexual orientation fit into the discourse on gender, and how does it fit into discussions on race and ethnicity? Current debates on race, gender, and ethnicity were highlighted by the 2008 election of the first African-American president and the ever-growing prominence of women in the highest levels of American politics. Does this mean that we have entered a post-racial era? Where exactly do we stand on women and gender-related issues? What about the place of GLBT issues in the public domain? This course explores these themes and topics.

Credits	**3**
Prerequisites	**ENG 110**

SOS 190

This course surveys trends in popular culture and the debates about how those trends affect the larger culture in general. n The course will focus on a variety of popular media, which can include: music, video games, movies, television, and social networking. Topics for discussion may cover: the process of invention in popular culture; the relationship between popular culture, intelligence and engagement; the nature of celebrity; the function of simulacra; changes in narrative structure; representation of race and gender, and more.

Credits	**3**
Prerequisites	**ENG 110 or ENG 116**

SOS 210

This course examines diversity, equity, and inclusion in the workplace. Categories of diversity under examination include gender, LGBTQ identities, race, ethnicity, and disability. Current problems and solutions are discussed through case studies from various work environments, particularly STEM and the arts. Relevant civil rights legislation is also covered, including Title IX and the 1990 Americans with Disabilities Act.

Credits	**3**
Prerequisites	**COM 150 or COM 250**

SOS 399

The content of this course may change each time it is offered. It is for the purpose of offering a new or specialized course of interest to the faculty and students that is not covered by the courses in the current catalog.

Credits	**3**
Prerequisites	**Permission of instructor required.**