

# Catalog Addendum 2012-2013

Updated: December 6, 2012

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# NOTICES

# Authorization

[Updated 2012]

In accordance with the Degree-Granting Institutions Act Regulations (WAC 250-61-060 (3)), 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.

# **GENERAL INFORMATION**

## Name of the School (Branch Campus)

DigiPen Institute of Technology Singapore

# **Contact Information**

DigiPen Institute of Technology Singapore Pixel Building @ one-north 10 Central Exchange Green #01-01 Singapore 138649

Telephone: (65) 6577 1900 Facsimile: (65) 6577 1908 Email: *singapore@digipen.edu* Web: *singapore.digipen.edu* 

# Name of the School (Main Campus)

DigiPen Institute of Technology

# **Contact Information**

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

Telephone: (866) 478-5236 or (425) 558-0299 Facsimile: (425) 558-0378 Email: *info@digipen.edu* Web: *www.digipen.edu* 

# Accreditation

#### [Updated 2012]

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

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

- 2002: DigiPen was granted initial accreditation by ACCSC, including the approval for the Real Time Interactive Simulation (BS) degree program.
- 2002: DigiPen received ACCSC approval for the Production Animation (BFA) degree program.
- 2003: DigiPen received ACCSC approval for the Computer Engineering (BS) 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 Game Design (BA) and Game Design (BS) degree programs by ACCSC.
- 2010: DigiPen was granted approval for its relocation to its current facility by ACCSC.
- 2010: DigiPen received ACCSC approval which allows DigiPen Institute of Technology Singapore to disclose in its advertising that it is a branch campus of DigiPen Institute of Technology.
- 2011: DigiPen Institute of Technology 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 is granted approval for its Digital Arts (MFA), Music and Sound Design (BA), and Engineering and Sound Design (BS) degree programs by the ACCSC.

Any person desiring information about the accreditation requirements or the applicability of these requirements to the Institute may contact the ACCSC by mail:

2101 Wilson Boulevard, Suite 302, Arlington, VA 22201, Telephone: (703) 247-4212. Web: *www.accsc.org*.

# History of DigiPen Institute of Technology

#### [Updated 2012]

DigiPen was founded in 1988 by Mr. Claude Comair 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, which in 1994, 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 twoyear 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 fully 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) that would 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. In 2008, DigiPen added two more degree programs: the 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, the Bachelor of Science in 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 US campus to its current location at 9931 Willows Road Northeast in Redmond, Washington. In addition to uniting DigiPen's BFA and BS programs under one roof, the larger campus provides more spaces for students to learn, meet, and collaborate on group projects.

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

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 Engineering and Sound Design, and the Master of Fine Arts in Digital Arts.

\*ACCSC granted approval for this degree in 2006. \*\* DigiPen's international branch campus (DigiPen Europe-Bilbao) does not fall within the scope of ACCSC accreditation.

## Awards

#### [Updated 2012]

DigiPen students have consistently excelled in both national and international game development competitions. At the

annual Independent Games Festival (IGF) in San Francisco, California, DigiPen games have been nominated to the Student Showcase every year for the last 12 consecutive years. Since 2001, the IGF has granted 44 awards to 34 DigiPen student games. In 2007, 2008, and 2009, DigiPen projects also won the coveted Best Student Game award (for Toblo, Synaesthete, and Tag: The Power of Paint, respectively). In the IGF Main Competition, five DigiPen student games have been nominated for awards in various professional categories, and in 2004 Bontago won the "Innovation in Game Design" award while competing against professional developers. In 2011, the Independent Games Festival China, part of the annual Game Developers Conference China, selected three DigiPen games for its Student Competition which honors six of the top regional student games. DigiPen Singapore student game Pixi won the "Excellent Student Winner" award, while DigiPen Singapore student game Void won the "Best Student Game" award, as well as the "Excellence in Technology" award in IGF China's Main Competition.

Other competition highlights for DigiPen students include five finalist positions at the Slamdance Guerrilla Gamemaker Competition with two of those games winning their award categories, wins at the Northwest Games Festival, the Intel Games Demo, the IndieCade International Festival of Independent Games, and the PAX 10, as well as wins at the Indie Game Challenge, which in 2010 awarded the \$100,000 nonprofessional Grand Prize to the DigiPen student game GEAR and in 2012 gave the Gamer's Choice Award to the DigiPen game Nitronic Rush. In 2011 at the Tokyo Game Show, only two of the 10 games showcased at the annual Sense of Wonder Night were from North America, with one of those, Solstice, being a DigiPen student project. Additionally, DigiPen students have won numerous awards at the Austin Game Developers Conference in Game Narrative Reviews and Poster Competitions.

# **Continuing Education Program\***

#### [Updated 2012]

DigiPen Institute of Technology Singapore is a Continuing Education and Training (CET) centre appointed by the Singapore Workforce Development Agency (WDA) for delivering Workforce Skills Qualification (WSQ) accredited training programs in game development.

The objective of the CET center is to train working adults in skills that contribute to the growth of the Interactive Digital Media industry in Singapore.

The full-time and part-time public-run programs are designed for individuals looking to enhance their knowledge of Game Development and Computer Animation or seeking a career transition into the game industry. The CET Center also serves as a resource for companies seeking specialists and customized training in the areas of Software Development, Game Design and Digital Art.

For updated listings and information about the CET programs please refer to: https://singapore.digipen.edu/continuing-education.

\*Continuing Education Program does not fall within the scope of ACCSC accreditation

# DigiPen Institute of Technology Outreach\*

[Updated 2012] In addition to its post-secondary degree programs, DigiPen Institute of Technology, offers opportunities for primary, secondary, junior colleges and polytechnic students to learn about the process of video game and 3D animation production. Now branded as part of DigiPen Institute of Technology's ProjectFUN Initiative, DigiPen Institute of Technology has several programs, which support art, science, and math education.

\*DigiPen Institute of Technology Outreach Programs do not fall within the scope of ACCSC accreditation.

# **Institutional Mission**

#### [Updated 2012]

Our mission is to provide an exemplary education and to further research in digital media, simulation, and interactive computer technologies by teaching the academic fundamentals and applied theory necessary for our students to lead, innovate, and advance these industries. Through the work of our students, faculty and staff, we strive to empower and inspire these industries on a global level.

Building on a strong foundation rooted in academics and industry experience, we challenge our students to apply their knowledge towards the creation of real-world products for the ever-advancing demands of a technological society. Embracing teamwork and creative exploration, our mission is to produce highly qualified leaders and originators who will instigate growth, productivity, innovation, and success in their professions and industries.

### About DigiPen Institute of Technology Singapore's Facilities and Equipment

#### [Updated 2012]

DigiPen Institute of Technology Singapore encompasses over 2,200 square meters with a library, dedicated computer labs for students, and classrooms for lectures and instruction. The classrooms vary in size from lecture halls accommodating up to 70 students to small classrooms of 15 students. The labs also vary in size from those accommodating 64 students to smaller ones seating 14 students. The Institute also has an open computer lab that seats approximately 64 students.

Weekly student access to the Institute is from 8:30 A.M. to 12:00 A.M., Monday through Saturday, and from 12:00 P.M. to 12:00 A.M. on Sunday. Core office hours for the administrative staff run from 9:00 A.M. to 5:30 P.M., Monday through Friday, with additional hours as needed.

Major equipment items include PC workstations ranging from Core 2 Duo - 3GHz processors and 2GB RAM to Xeon processors with 4GB RAM and Quadro FX graphics cards, along with industry software for 2D and 3D animation production, and development tools for game engine creation. Various presentation formats are also available, including DVD players, VCRs, document cameras, and CD players. All computers are on an internal network and have access to printers, servers, and archival media. The Institute upgrades the computer equipment on a periodic basis and as our student body grows larger each year, the Institute will acquire additional equipment to accommodate the new student population.

# CANCELLATION AND REFUND POLICIES 2012-2013

[Updated 2012] The Institute's Cancellation Policy:

Applicants who have not visited the school prior to enrollment will have the opportunity to withdraw without penalty within three (3) 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.

Singapore Institute of Technology's Refund Policies:

- Students who withdraw before their matriculation date will receive a full refund less S\$100.00\* administrative fee;
- Students who choose to withdraw between their matriculation date and the start of their program will receive a refund of 50% of the tuition fee less S\$100.00\* administrative fee;
- No refund will be given for withdrawal after commencement of the program.

\*All prices quoted excludes 7% GST

For more information, please refer to SIT's website at *www.singaporetech.edu.sg*, SIT's student handbook or contact SIT's Admissions department.

# FINANCIAL ASSISTANCE\*

## Financial Assistance Schemes Offered by SIT

[Updated 2012]

(For Singaporean citizens and Permanent Residents only)

Students enrolled at DigiPen Institute of Technology Singapore are eligible to apply for financial assistance schemes offered by SIT.

For more information about financial assistance schemes and scholarships offered by SIT, please visit *www.singaporetech.edu.sg* or contact SIT's Admissions department.

\*Financial assistance and scholarships are available to those who qualify.

# APPLYING TO DIGIPEN INSTITUTE OF TECHNOLOGY SINGAPORE

# **Undergraduate Application Process**

#### [Updated 2012]

The admission process is administered by SIT and involves the following steps:

through SIT's application portal. This application form is available at: *https://adm.singaporetech.edu. sg/sitadmission/* 

- 2. The application received at SIT goes through centralized processing.
- 3. Applicants are shortlisted for interviews.
- 4. All applicants are notified about their application status via email or through SIT's online application system, *www.singaporetech.edu.sg*.
- Successful applicants can accept offer at Joint Acceptance Platform or by completing an acceptance form (as stipulated in the e-offer letter).
- 6. Applicants who accepted offer will receive a prematriculation package via email.
- 7. Successful applicants will need to complete the prematriculation procedure by stipulated deadline.
- 8. Successful applicants will then matriculate to SIT and collect the SIT Matriculation card.

For more information about the admission process, please visit *www.singaporetech.edu.sg.* 

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

- 1. All application forms: Must be submitted online through SIT's admission portal at *www.singaporetech.edu.sg.*
- An application fee of \$15 (includes GST) will be payable to SIT. Payments can be made using one of the following methods:
  - Cheque / Bank draft / Money order / Cashier's order made payable to "Singapore Institute of Technology"

Please indicate your Name, I/C No., and application number on the back of the cheque.

You will need to mail the cheque/ money order / cashier order/ bank draft to:

Singapore Institute of Technology EFG Bank Building 25 North Bridge Road, #02-00 Singapore 179104 (Finance Department)

- NETs through the Admissions Office at 25 North Bridge Road, #02-00, EFG Bank Building.
- Internet Banking Payment for DBS/POSB customers.
- Online payment via eNETs.
- Official transcripts or certified true copies: Documents should be certified by an official school representative or other authorized notary and sent directly to the Institute by the school or notary in a sealed envelope. Transcripts issued in a language other than English must be accompanied by literal translations completed by a recognized translating organization.

- 4. Personal statement: To be completed within SIT's online application portal
- Letters of recommendation (Optional): Two letters of recommendation from individuals familiar with your academic background and/or work ethic, i.e. instructor, guidance counselor, employer. Recommendation letters from family members will not be considered.
- 6. Official scores for the Test of English as a Foreign Language (TOEFL): This score is needed if English is not the Applicant's first language. This requirement can be waived if the Applicant has proof of completing at least four years of his or her most recent education at an institution in which English is the primary language of instruction. The Institute's TOEFL code is: 1493. Please see the section on Proof of Proficiency in the English Language for additional information.
- 7. Other official documentation (when applicable): This includes, but is not limited to, SAT scores, proof of legal permanent residency in Singapore, certified transcripts from all institutions of tertiary education (e.g., university transcripts), proof of citizenship in Singapore (e.g. I/C, passport, etc.) and photocopies of the personal particulars.
- 8. Official scores for the SAT 1 (recommended for Bachelor of Science in Computer Science in Real-Time Interactive Simulation and BSGD applicants only): The Institute's SAT code: 5473. Applicants who fail to register for SAT 1 may be required to sit for a written Math Assessment conducted by the Institute. Please see the Math & Science Requirements & Recommendations for Bachelor of Science Applicants section for details.
- Art portfolio: This is only required of applicants to the Digital Art and Animation (BFA) degree program. Please see the BFA Art Portfolio section for complete details about this important component of the application.
- Personal Game History: This is only required of applicants to the Game Design (BA or BS) programs. Please see the Personal Game History section for more details.
- Character analysis. This is only required of applicants to the Game Design (BA or BS) programs. Please see the Character or World Analysis section for more details.
- Card or Dice Game: This is only required of applicants to the Game Design (BA or BS) programs. Please see the Character or World Analysis section for more details.
- 13. Optional application components for Game Design applicants:
- 14. BAGD applicants: art portfolio or sketches of level designs.
- 15. BSGD applicants: sketches of level designs, photos of landscapes and urban environments that inspire you, drawings or sketches made by the applicant.

Applicants should not submit electronic games or modifications as the Office of Admissions will not install any of these.

# Proof of Proficiency in the English Language

[Updated 2012]

Non-native English speakers must provide proof of English proficiency in one of the following ways:

- A minimum Test of English as a Foreign Language (TOEFL) score of 550 (paper exam), 213 (computer exam), or 80 (IBT - Internet-Based Test). TOEFL code: 1493.
- A minimum International English Language Testing System (IELTS) score of 6.5 or higher.
- A minimum Cambridge English: Advanced (also known as a Certificate in Advanced English or CAE) score of C1 or higher.
- Completion of four years of high school at an English-speaking school, or an International School where the primary language of instruction is English.
- Completion of a bachelor's degree at an Englishspeaking institution.
- The Institute may accept other proof of English proficiency, such as internationally recognized standardized English test scores, the completion of English preparatory coursework, or internal English assessments on a case-by-case basis.
- The Institute may use its discretion and own internal assessments in determining sufficient English proficiency for students transferring from one DigiPen campus or program to another.

#### Math & Science Requirements & Recommendations for Bachelor of Science Applicants

#### [Updated 2012]

In addition to the requirements listed for all undergraduate applicants, those applying to any of the Bachelor of Science programs must have completed grade 12 or the equivalent with a recommended "B" average (3.0 GPA) in mathematics.

Applicants to any of the Institute's Bachelor of Science programs must demonstrate (through grades, SAT exam results, and coursework) sufficient knowledge of various topics in mathematics and have completed coursework in Algebra, Geometry and Pre-Calculus at a minimum before being able to matriculate into the degree program.

Additionally, applicants to the Bachelor of Science programs are encouraged, but not required, to take Calculus, Physics and Computer Science before coming to the Institute.

# Math Assessment (required for applicants who are unable to sit for SAT 1)

[Updated 2012]

At its discretion, the Institute may utilize a Math Assessment to assist in determining an applicant's knowledge in algebra, geometry, and trigonometry. Based on the result of the Math Assessment, an applicant may be required to successfully complete remedial mathematics courses taught at the Institute prior to starting a degree program, provided that the applicant meets all other minimum academic and admissions requirements.

#### **BFA Art Portfolio**

#### [Updated 2012]

The Institute's intent in reviewing applicants' portfolios is to ensure that students have appropriate foundational skills relative to the degree programs to which they are applying.

#### Portfolio Requirements for BFA Applicants

Applicants to the Digital Art and Animation (BFA) degree program must submit an art portfolio. This portfolio should contain between 15-20 samples of original artwork by the applicant for review. At least ten pieces of the portfolio must be drawings from direct observation; they may not be from photos or other 2D reference or from the student's imagination. The rest of the pieces beyond the first 10 drawings should demonstrate an applicant's artistic range and skill. Samples of animation, figure/animal studies, character designs, architectural renderings, landscape studies, sculpture, and painting are preferred for this part of the portfolio. If necessary, the Institute may request more samples for review.

#### The Portfolio Should Demonstrate the Following:

- The applicant has sufficient foundational drawing skills to meet the challenges of the Institute's rigorous curriculum. The portfolio should include at least 10 drawings directly from live observations, preferably of people and animals (not from the applicant's imagination or from 2D references such as a photograph or another artist's work). These drawings should clearly communicate the structure and 3D form of the subject. The applicant should focus on representational accuracy rather than on cartooning or heavy stylization.
  - 2. The applicant is a serious amateur artist. The portfolio should include five to 10 samples of the applicant's best work, regardless of the subject matter or medium. Sustained drawings (i.e. those that took two to three hours to complete) are encouraged to demonstrate the applicant's skill and concentration. These works should be selected with an eye toward quality, design, composition, and a dedication to craft.

## *Guidelines for All Portfolio Submissions* Please keep the following in mind when submitting your portfolio:

- Applicants should label portfolios clearly with their name on the front.
- All artwork should be labeled with the date of completion and medium used.
- Color copies, photocopies, slides, photographs, or work contained on CDs will be accepted, since portfolios will NOT be returned.
- Applicants who submit hard copies of artwork should contain their portfolios in A4 size binders.

#### Personal Game History for Applicants to Game Design Programs

#### [Updated 2012]

Applicants specifically interested in the BS in Game Design or BA in Game Design programs must submit a Personal Game History with their application.

The Personal Game History is a list of all the games you have ever played. Start with video games and list all the ones you can remember. Follow that with a list of all the non-video games you have ever played. List everything you can think of, whether you liked those games or not (it is okay if the list is very long). Finally, list the names of any original games you have created yourself (of any kind). In parenthesis after each game listed, write a short description of what you have done with that game (played it a little, played it a lot, played it professionally, made modifications to it, made levels for it, etc.). For any games you created, describe the type of game and the most interesting thing about it. Below is a sample of the required format, with some sample games and comments listed. Follow this format exactly (including the headers, capitalization, parenthesis, etc.).

> VIDEO GAMES Halo (Played it a lot.) Doom (Played it a lot, made levels for it.) Farmville (Played it a little.)

NON-VIDEO GAMES Dungeons and Dragons (Played it a lot, created new classes, ran several campaigns.) Spades (Played it a lot.) Chess (Played it a little.)

ORIGINAL GAMES Rhino Wars (A simple animal-based trading card game I made for my friends.)

#### Character Analysis for Game Design Applicants

#### [Updated 2012]

Applicants specifically interested in the BS in Game Design or BA in Game Design programs must submit a Character Analysis essay with their application.

- Choose one of the character images at https:// singapore.digipen.edu/admissions/admissionrequirements/game-design-essays/characteranalysis/, to analyze. Once you have made your choice, please write a two-page essay about this image. You must create a background story for the character. For example, you might explain how this character became a warrior or a scientist or whatever profession you see it doing. What led the character to select this profession? How do others react to the character? Additionally, you will need to provide a complete and concise overview of the character, including the following items:
  - Name, home (or culture), and class/status
  - o Characteristics, skills, talents, or powers
  - Type of game (strategy, first-person shooter, arcade, etc.) you see them in.

- Character motivation: what pushes them on a challenge or adventure?
- Fighting style, if any.
- o Other relevant attributes.

BS in Game Design or BA in Game Design applicants are being asked to do this so that we may evaluate their ability to think creatively and to communicate their ideas. Please keep in mind that this should be written as an essay rather than simply a list of details. Be sure to explain how details in the image led you to make your conclusions about the character. For the Character Analysis, you may expand on the items listed above; at a minimum, however, you must address those listed. Additional instructions about the Character Analysis essays may be posted along with the images from which they are selected and analyzed.

#### Card or Dice Game for Game Design Applicants

#### [Updated 2012]

Applicants specifically interested in the BS in Game Design or BA in Game Design programs must submit a Card or Dice Game written as an essay with their application.

The rules for this game must use only normal six-sided dice and/or a normal deck of traditional playing cards - no other physical components are allowed (other than scratch paper for keeping score, if needed). Do not send dice or cards with your application, we will use our own when evaluating your game. After creating these rules, you must test your game with other players (more than once) and describe the results in detail (including whether the results were good, bad, or mixed). The rules themselves should be at least one-third and at most two-thirds of this submission, with the rest being the play-testing description (which must come after the rules). The rules should, of course, be updated based on the results of your play-testing. The total length must be between 800 and 1200 words. The rules and play-testing description must be clear and well-organized, using proper grammar, and have perfect spelling.

### Admission/Denial to DigiPen Institute of Technology Singapore's Programs

#### [Updated 2012]

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

Accepted undergraduate applicants will receive an enrollment packet via standard mail. This packet includes an official letter of acceptance, and, if applicable, a transfer credit evaluation letter and/or a request to furnish proof of high school graduation, polytechnic diploma or completion of a bachelor's degree before the start of classes in the fall. Students will receive their student enrollment agreement by email. By returning the signed enrollment agreement and proof of graduation, an applicant has confirmed enrollment. Applicants who are accepted and enrolled are required to attend an official orientation session prior to the start of the program. Applicants who are not accepted to the Institute will receive a letter of rejection via email by SIT. When possible, the Institute will attempt to provide information about the specific areas in which an applicant needs improvement if he or she wishes to reapply in subsequent years. Please see the section on the Reapplication Process for more information.

#### **Readmission after Disciplinary Action**

Applicants should include a formal appeal for the Disciplinary Committee to review along with their application for readmission. Applicants previously withdrawn for disciplinary reasons must receive clearance from the Disciplinary Committee to return.

#### **Readmission for Personal Reasons**

There are usually no impediments to returning to the Institute if there is space available; however, an academic plan may need to be developed with the student's advisor upon reenrollment, and students requesting readmission after an extended period of time must meet with an academic advisor to determine the viability of completing their degree program.

#### **Readmission after Non-Payment of Account**

Outstanding accounts must first be settled before applying for readmission. Once settled, the policy for readmission follows the same guidelines listed under "Readmission for Personal Reasons".

Exceptions to these requirements will only be made on a case-by-case basis at the discretion of SIT and the Institute.

#### Submission of Official Transcripts of Non-DigiPen Institute of Technology Singapore Coursework

All readmission applicants to DigiPen Institute of Technology Singapore must request an official transcript from DigiPen Institute of Technology Singapore's Registrar's Office to be sent to the Office of Admissions as part of their application. Additionally, if the applicant has taken courses from another college since leaving DigiPen Institute Technology of Singapore, he/she must also have any and ALL official transcripts forwarded to the Office of Admissions from the registrar of each institution attended. The transcripts should show all academic work until the last semester or quarter completed. If the applicant is approved for readmission with coursework in progress, his/her admission status will be provisional, pending receipt of the final transcript(s).

# **Non-Matriculated Studies**

#### [Updated 2012]

Applicants who are interested in taking individual courses that are part of the Institute's degree programs may register for them based on each semester's course offerings and availability. Applicants will be handled on a first-come, firstserved basis.

- 1. Applicants to the Non-Matriculated Studies program must show proof of graduation from high school and a recommended minimum 2.5 GPA in their most recent studies for acceptance into the program.
- Upon application, a degree program track must be selected and additional corresponding materials may be required.

- Students must pass or show proof of having passed prerequisite courses before they are able to register for more advanced courses. Waiver exams may be administered if the student feels he or she has achieved proficiency.
- 4. Students must earn a "C-" or better to pass courses that are core to their chosen track.
- Students must maintain a minimum 2.0 GPA in order to remain enrolled in the Non-Matriculated Studies program. Enrollment is on a continuous basis unless students do not register for classes for a given semester at which time they will be withdrawn.

Please note that courses taken in the Non-Matriculated Studies program do not lead to a degree and are not applicable to earning a professional certificate from the Institute.

# WAIVER CREDIT, AP EXAMINATIONS, CLEP, AND OTHER CREDIT

## **Transfer Credits**

#### [Updated 2012]

Credit earned by examination at other colleges or universities in the last 10 years may be transferred, provided such credit meets the guidelines used by the Institute. The Registrar will evaluate college credits earned elsewhere with respect to graduation requirements at the Institute. Developmental classes, orientation classes, or classes in which a student receives a "Pass" are not eligible for transfer credit consideration. Courses transferred or waived are entered on transcripts, but no grades or quality points are awarded.

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

- The courses(s) offered for transfer must be taken at a bona fide, legitimate institution recognized and approved by a 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 remains at the Institute's discretion.
- The course(s) must be comparable in academic quality to the Institute courses; transfer credit will be denied for courses not meeting this standard. Accordingly, current students are strongly urged to seek transfer approval from their advisor and the Registrar using the form provided for this purpose prior to enrollment in any course for which transfer approval might be sought.
- 3. Transfer credit will be considered for courses in which the grade of "B-" or better is recorded.
- 4. Courses transferred to a student's major may also require a validation examination in order to be accepted.

5. "Credit" or "Pass" grades will not be accepted for transfer.

If a course is accepted for credit, it will be counted as a transfer credit. No grade points from such transfer courses will be calculated in the Institute grade point average. However, grades transferred for courses taken in residence at institutions with which the Institute has direct, formal institutional exchange agreements are exempt from this policy and will be recorded. Credit hours from another institution that are accepted towards the student's educational program must count as both attempted and completed hours. Courses transferred in may not be used to substitute improved grades for passing grades earned at the Institute.

# Transfer Credits for Diploma Graduates from Local Polytechnics

#### [Updated 2012]

The Institute and SIT entered into collaboration on March 2010 to offer an admission pathway for graduates with related diplomas from the five local polytechnics, namely:

- Nanyang Polytechnic
- Ngee Ann Polytechnic
- Republic Polytechnic
- Singapore Polytechnic
- Temasek Polytechnic

Students should refer to the SIT website at *www.singaporetech.edu.sg* for information on related diplomas.

Under this collaboration, students may transfer certain credits for courses that they have successfully completed at their respective polytechnics.

The Institute will communicate to these students their respective course sequences after taking into consideration the approved transfer credits. Students will also be informed of any other necessary bridging courses and/or additional electives that they need to successfully complete in order to meet the requirements to graduate with a degree from the Institute.

# STANDARDS OF PROGRESS

## Semester Credit Hour

#### [Updated 2012]

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 20 hours of supervised laboratory time, or
  at least 30 hours of documented independent study
- activities, or
- at least 45 hours of internship or externship 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 or externship 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."

#### **Undergraduate Students**

To maintain satisfactory progress, undergraduate students must attain a minimum cumulative grade point average at various milestones in their program of study.

Students Who Began in the 2011 Cohort or Earlier

Milestone – Undergraduate	Minimum GPA Requirement
Up to 50% of program 77 attempted credits* for BSCS in RTIS, or BSGD 73 attempted credits for BAGD 72 attempted credits for BFA	1.8 or better cumulative GPA
Over 50% of program 78-153 attempted credits for BSCS in RTIS, or BSGD 74-146 attempted credits for BAGD 73-143 attempted credits for BFA	2.0 or better cumulative GPA
<b>100% of program</b> 154 earned credits or greater for BSCS in RTIS, or BSGD 147 earned credits or greater for BAGD 144 earned credits or greater for BFA	2.0 or better cumulative GPA

Students in Cohorts that Began in 2011 or Later

Milestone – Undergraduate	Minimum GPA Requirement
Up to 50% of program 77 attempted credits* for BSCS in RTIS, or BSGD 73 attempted credits for BAGD 73 attempted credits for BFA	1.8 or better cumulative GPA
Over 50% of program 78-153 attempted credits for BSCS in RTIS, or BSGD 74-146 attempted credits for BAGD 74-144 attempted credits for BFA	2.0 or better cumulative GPA
<b>100% of program</b> 154 earned credits or greater for BSCS in RTIS, or BSGD 147 earned credits or greater for BAGD 145 earned credits or greater for BFA	2.0 or better cumulative GPA

\* An attempted credit is defined as any credit that is awarded a final letter grade ("A" to "F"). Credits earning a "W" or "I" are not considered attempted credits.

# Withdrawing from the Institute

#### [Updated 2012]

To formally withdraw from the Institute, a student must submit a completed Withdrawal Notice Form to the Registrar's Office. Withdrawal Notice Forms may be downloaded from the Student Record System.

Students below the legal age must have a parent or guardian submit the withdrawal notice. A student may withdraw from the Institute before the end of the eighth week of instruction of a semester.

Upon withdrawing from DigiPen, the student shall immediately return all materials in his or her possession relating to the program, whether created by the student or other students, or provided by the Institute.

# Hardship Withdrawal

#### [Updated 2012]

Students may seek a hardship withdrawal when one of three conditions prevents a student from completing all courses: death of a close family member, catastrophic illness in the family, or injury or illness that incapacitates the student. Hardship withdrawals may be sought any time after the last

date to withdraw from classes, as listed in the Academic Calendar, but not after all materials for a course have been completed (i.e., after submitting the final exam or final assignment). The Hardship Withdrawal Form, a personal statement, and appropriate documentation (i.e., death certificate, obituary, letter from a state-licensed physician or mental health professional) must be provided to support all requests to Student Affairs.

Once all documents are received, Student Affairs will forward the documents to the Hardship Withdrawal Review Committee. If the committee grants a hardship withdrawal, the student will receive "W" grades in all classes and is ineligible to receive a grade or an "I" in any class in that semester. The student will be withdrawn from the Institute, effective his or her last day of attendance. Students seeking readmission must abide by the Institute's readmission policy.

# The "W" Grade

#### [Updated 2012]

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

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.

- If withdrawing after the end of the second week of instruction and before the end of the eighth week of instruction, the Registrar will assign a final grade of "W" for each course in which the student was enrolled.
- At the end of the eighth week of instruction of the semester, withdrawn students will receive final grades for each course in which they were enrolled.

Please refer to SIT student handbook for information on withdrawal from SIT.

# **Process for Grievances and Appeals**

[Updated 2012]

#### **Other Disputes**

If the Student feels he/she has any other type of dispute with the Institute, he/she should file a complaint with the relevant Department Chair or supervisor. A copy of this complaint shall be given to those involved with the dispute. If the Student is not satisfied with the decision of the Department Chair, a second complaint may be filed to the Chief Operating Officer – International. If the Student is still dissatisfied with the decision, the Student may appeal to the President of the Institute. If the student remains unsatisfied with the decision, he/she may appeal to the Executive Director of the Washington Student Achievement Council at:

Washington Student Achievement Council P.O. Box 43430 Olympia, WA 98504-3430

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, U.S.A 1-703-247-4212 www.accsc.org

A copy of the ACCSC Complaint Form is available at the school and may be obtained by contacting Mr. Gabriel Lee, Director of Operations or online at *www.accsc.org*.

Mr. Gabriel Lee can be contacted at the following address:

Mr. Gabriel Lee Director of Operations DigiPen Institute of Technology Singapore Pixel Building @ one-north 10 Central Exchange Green, #01-01 Singapore 138649 Telephone: +65 6577 1900 *Email: ghlee@digipen.edu* 

# CHANGE OF MAJOR AND GRADUATION

# **Requesting a Change of Major**

#### [Updated 2012]

Current students may request a change of major by submitting a "Change of Major" form to the Office of Admissions, along with any additional materials needed for the major to which they would like to transfer. The Change of Major form is available online through the Student Records System (SRS). In addition, students need to contact SIT's admission department to undertake the necessary process stipulated by SIT.

Students who wish to switch to either of the Game Design degrees must submit any extra materials (Game Modification Analysis Essay and Character/World Analysis Essay) before the change of major can be evaluated. Please submit colored copies or electronic files as originals will not be returned. A decision will be sent via email or mail to students requesting a change of major. Students who are approved to change majors will need to sign a new student enrollment agreement for the new major before making the change official.

Students who change their majors are encouraged to meet with their academic advisors or with the head of the program to which they are transferring to determine what changes need to be made to their schedules or recommended course sequences.

#### Important Information Regarding Change of Major Requests

- Change of majors will only take effect on the first day of a new semester. To be considered, requests must be submitted at least fifteen working days before the start of a new semester; otherwise, the request will be considered for the next available semester.
- Students requesting a change of major should remember to consider add/drop deadlines. Requests for change of majors do not exempt students from the add/drop policies at the Institute.
- Students may register for classes in any major prior to the deadline for adding a class, but it is recommended that they speak to their academic advisors if they have not yet had their requests for a change of major approved.
- Students should speak to the degree program faculty if they have specific questions about transferring from one degree program to another.

Any questions about the status of a change of major request or about this process should be directed to the Office of Admissions.

# **Applying for Graduation**

#### [Updated 2012]

The Institute sets minimum requirements for all students seeking undergraduate degrees. The Institute 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 incomplete portion of

#### coursework.

Most students will follow the graduation requirements published in the catalog for the year they enter the Institute. 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.

Approximately four to six weeks after students apply for graduation, a degree audit report will be issued. This report identifies courses students have taken to complete their degree requirements. This report is used to assist students in planning future coursework to ensure that all graduation requirements are met. Students should take the degree audit report with them when checking progress toward graduation with their academic advisor and/or the Registrar's Office. Students are responsible for notifying the Registrar's Office of any changes in their proposed programs and for resolving any questions prior to registering for their final semester at the Institute.

All Incomplete grades and conditions affecting graduation must be removed from the student's record by the last regular class period of the semester. All credit course work affecting graduation must be completed by the regular class period of the semester. A letter of instruction will be emailed to degree candidates prior to their commencement regarding deadlines and procedures for commencement-related activities.

Undergraduate students who feel there is justification for an exception to these graduation requirements may petition the Appeals/Discipline Committee. Information on filing a petition is available at the Registrar's Office.

# **Graduation Application Process**

[Updated 2012]

Graduation Date	Graduation Application Due Date
April	December 1
August	April 1
December	August 1

- 1. The student completes the Graduation Application and submits the S\$214.00 (inclusive of 7% GST) graduation fee by the deadlines stated above..
- 2. The academic advisor or the Registrar will review the most recent transcript or degree plan to verify progress and will notify the student whether or not he or she has completed all courses satisfactorily to date, and, if upon satisfactory completion of courses for which the student is currently registered, he or she 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. Degrees will be mailed as soon as possible after that process, which should be from four to six weeks after completion. The student needs to keep the Registrar's Office informed of address changes so that the degree is mailed to the correct address.

# **STUDENT AFFAIRS**

#### [NEW]

The Student Affairs office 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 Institute of Technology Singapore and beyond, including:

- Academic Advising
- Academic Support Center
- Alumni Services
- Campus Life
- Career Services
- Counseling Helplines
- Disability Support Services
- International Student Services
- Student Activities & Organization
- Student Programs
  - First-Year Seminar
  - o Graduation
  - o New Student Orientation

The sections below detail some aspects of a few of the services provided by Student Affairs.

# **Student Advising**

#### [Updated 2012]

The Institute has adopted a faculty advisor model to provide academic and career-related advising for students. Each student is assigned a full-time faculty member as an academic advisor. Advisors provide answers to academic questions, approve extra classes, and perform degree audits and other administrative functions. Students meet with their advisor during new student orientation and are encouraged to meet with their advisors at any time during their education. Advisors are instructed to follow up with advisees once a semester, especially during class registration time. Students are required to seek advisor approval for academic status changes, such as changing majors or applying for graduation.

# Academic Support Center

#### [NEW]

Peer tutoring is available for 100 and 200 level courses in the Academic Support Center. For further information please contact *studentaffairs.sg@digipen.edu*.

# **Placement Assistance**

#### [Updated 2012]

Advice on career options is available to enrolled students. With the assistance of Student Affairs and faculty members, the Student Affairs office works to establish relationships with prospective employers on an on-going basis. It offers resume and job-hunting workshops to supplement career education found in the curriculum.

The Institute uses a job portal to post current job openings in the industry. The Institute also provides placement services in the form of internships that may be available during the summer; the placement program bases its recommendations of students on their academic performance. Additionally, the Institute hosts an annual career fair that attracts employers from around the country to the campus to review student portfolios and conduct interviews. The Institute also attends industry events, such as the Game Developer's Conference, to promote the Institute's programs and its students. Placement assistance continues beyond graduation as these services are extended to alumni. For further information, please contact the Student Affairs office. Please note that employment upon graduation is not guaranteed.

# **Disability Support Services**

#### [Updated 2012]

DigiPen Institute of Technology Singapore strives to ensure that all students are provided with an equal opportunity to participate in the college's programs, courses, and activities. Students requiring special assistance must self-identify to the Student Affairs office and provide current documentation supporting their disability. Students must assist in identifying the proper accommodations and negotiate these accommodations at the beginning of each semester. The Institure will provide reasonable accommodations and academic adjustments as long as provisions do not fundamentally alter the nature of the programs or the academic requirements that are considered essential to the program of study.

# **Graduate Follow Up**

#### [Updated 2012]

The Institute maintains a database of all graduates, and the Institute alumni are encouraged to report back regarding changes to their professional status. DigiPen Institute of Technology hosts an annual reunion at the Game Developer's Conference and extends placement services to all alumni. DigiPen Institute of Technology Singapore graduates are welcomed to attend these U.S. alumni events.

# EDUCATIONAL RIGHTS AND PRIVACY OF STUDENT RECORDS

# Release of Student Directory Information

#### [Updated 2012]

The following information is considered public or directory information and may be released to anyone unless a student informs the Registrar's Office that he or she does not wish any information released:

- 1. Name
- 2. Local telephone number
- 3. Institute email address
- 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

## "NO" to Release of Information

#### [Updated 2012]

If a student does not wish to have the Institute release any directory information and/or does not want directory information to appear in any published or electronic Student Directory, he or she may restrict access through the Registrar's Office. No information will be released on students or to students who have restricted release of directory information, including degrees awarded and dates of attendance.

# Change from "NO" to "YES"

#### [Updated 2012]

If a student restricted the release of directory information and now wishes to allow this information to be released, he or she must go to the Registrar's Office and present photo identification and a completed Release/Restrict of Directory Authorization Form.

# REGULATION OF CONDUCT AND DISCIPLINARY PROCEDURES

#### [Updated 2012]

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.

# **Rules and Regulations**

#### [Updated 2012]

1. It is strictly forbidden to bring in or out of the premises any digital storage and any form of memory sticks or optical media, diskettes, video recorders, etc., other than for academic and approved usages which directly apply to courses being taken by the student during the term of this agreement, or for the required purpose of maintaining back-up copies of student-created projects and assignments. Additionally, it is forbidden to bring in any personal computers or software, as well as any video or audio recording equipment, without first agreeing to and signing a Network and Internet Usage Agreement. Students are responsible for guaranteeing that any files transferred to and from the Institute's equipment are free of malicious viruses or Trojan horses. In respect to the above, students are only allowed to carry in and out of the Institute premises data files only and not executable files. This includes

student-created executables. Following this policy will greatly reduce the risks of virus infections to the Institute network. In order for the Institute faculty to review and grade projects and assignments, source code must be stored and executables must be generated at the Institute from the corresponding source code.

- Students are forbidden from downloading any files from the Internet or installing any software, including but not limited to freeware and/or shareware, without the written approval from the Institute's faculty member or IT department. Furthermore, illegal use of the Internet may be prosecuted to the fullest extent of the law.
- In order to prevent damage to equipment and facilities, food and/or drink are not permitted anywhere within the training areas of the premises.
- 4. Smoking is not permitted anywhere within the premises, washrooms, elevators, or stairwells.
- 5. Student ID tags must be worn visibly when on the premises. Lost or stolen ID tags must be reported to the Administration Office as soon as possible.
- 6. All student projects must receive approval from the Institute's instructors prior to commencement of any production. The Institute reserves the right to reject ideas or to stop production of any student game, animation, or project for reasons deemed appropriate to the Institute. The Institute will not allow the production of any student work that contains or makes a direct or indirect reference to any of the following material/subjects:
  - · Religious content
  - Religious symbols
  - Pornographic material
  - Excessive violence
  - · Sexual and nude content
  - Promotion of illegal substances
  - Promotion of racism or hate
  - Content demeaning to any group of society
- 7. Plagiarism will not be tolerated. Any student who submits the work of another person as his or her own is considered to have committed plagiarism. Types of work that can be plagiarized include, but are not limited to, source code, artwork, concepts, designs, or other material. Anyone submitting someone else's work without the explicit written permission from the legal owner may have violated the owner's intellectual property rights or copyrights, in addition to committing plagiarism. If any student is unsure as to what constitutes a case of plagiarism, he or she should consult an instructor for clarification.
- 8. Cheating on an examination will not be tolerated. Using any materials other than those authorized by the examiners during an exam is an example of cheating.

- 9. Submitting false documents, transcripts, or any other academic credentials to gain admission to the Institute or to obtain any academic benefit is grounds for expulsion without recourse.
- 10. Disrupting instructional activities, including making it difficult to proceed with scheduled lectures, seminars, examinations, tests, etc., shall be considered an offense.
- 11. In the interest of maintaining an environment that is safe and free of violence and/or threats of violence for its employees, students, and visitors, possession of a dangerous weapon is prohibited on property owned by or under the control of the Institute. Weapons and ammunition are potential safety hazards. Possession, use, or display of weapons or ammunition is inappropriate in an academic community for any reason, except by law enforcement officials. No weapons or ammunition shall be worn, displayed, used, or possessed on campus. Any member of the Institute community who violates this policy shall be subject to appropriate disciplinary action up to and including dismissal from the Institute and shall be subject to all appropriate procedures and penalties including, but not limited to, the application of the criminal trespass provisions of the law of the Republic of Singapore. Any person who is not a member of the Institute community who violates this policy shall be subject to all appropriate procedures and penalties including, but not limited to, the application of the criminal trespass provisions of the law of the Republic of Singapore. Members of the Institute community who are aware of any violations of this policy or who have other concerns about safety or weapons should report them to the Dean of Faculty, Director of Operations, or the Chief Operating Officer.
- 12. Evidencing symptoms of alcohol or drug use while on Institute property, or the procurement or possession of alcohol or illegal substances on Institute property, is considered an offense.
- 13. It is forbidden to damage, remove, or make unauthorized use of the Institute's property or the personal property of faculty, staff, students, or others at the Institute. Without restricting the generality of "property," this includes information, however it may be recorded or stored.
- 14. It is strictly forbidden to use any equipment in the premises to produce any commercial work. The equipment is only to be used for homework and training purposes. Any attempt to produce commercial work will result in legal action against the offenders.
- 15. Public areas and equipment of the building must be kept clean. No tampering, moving, defacing, or otherwise altering the premises, equipment, or the building property is allowed.
- 16. Graffiti, other forms of mural art, or the posting of signs anywhere in the premises and the building without permission of the Administration is not permitted.
- 17. Office equipment (photocopier, fax, office phone, etc.) is not available for student use.

- 18. The assault of individuals, whether verbal, nonverbal, written, physical, including conduct, or any other kind of assault which leads to the physical or emotional injury of faculty, staff, students, or others at the Institute, or which threatens the physical or emotional well-being of faculty, staff, students, or others at the Institute, is considered an offense.
- 19. In accordance with applicable law, the Institute prohibits sexual harassment and harassment between employees, between students, and between employees and students. Harassment due to race, sex, color, national origin, ancestry, religion, physical or mental disability, veteran status, age, or any other basis protected by federal, state, or local law. may violate the law and will not be tolerated. The Institute's policy prohibits inappropriate conduct even though it may not reach the legal standard for harassment.
- 20. It is forbidden to attempt to engage in, aid and abet others to engage in, or attempt to engage in conduct which would be considered an offense.
- 21. Failing to comply with any penalty imposed for misconduct is considered an offense.

# **Degree Programs** for the Academic Year 2012-2013

# BACHELOR OF SCIENCE IN COMPUTER SCIENCE IN REAL-TIME INTERACTIVE SIMULATION

[Updated 2012]

## **Program Overview**

The electronic and digital entertainment industry is one of the fastest growing and most exciting career choices of the future. The video game, movie, and military industries are only a few of those that demand well-trained, enthusiastic programmers, designers, artists, and managers. DigiPen Institute of Technology is a key provider of these individuals, and the Bachelor of Science in Computer Science in Real-Time Interactive Simulation (BSCS in RTIS) prepares programmers for these industries. Designed and developed by industry experts and DigiPen faculty, the Institute's fouryear BSCS in RTIS program is a computer science degree that is highly focused on the technical area of graphics and simulations. Participants in the BSCS in RTIS program specialize in the skills and tools necessary to create real-time simulations of real-life events and imaginary situations.

The BSCS in RTIS program offers extensive training in mathematics and physics as a foundation for the various topics presented in general computer science and computer graphics. Throughout the degree program, BSCS in RTIS students participate in several team-based projects. These substantial projects are designed to give students concrete experiences in which they apply the theoretical knowledge gained from their courses. Forming the cornerstone of the program, these projects exemplify many of the skills necessary in the video game industry today: teamwork, design, implementation, follow through, and business knowledge, among others. BSCS in RTIS students gain the experience of designing, programming, and testing a variety of simulations and games, including text-based, scrolling, simulation, and 2D and 3D games.

Students in this degree program work both individually and collaboratively to learn the fundamentals of game design, production, and programming. Additionally, they write game design documents and technical design documents, learn how to schedule tools and techniques, and participate in the full production of several games. These game-oriented productions are a perfect media to present complicated subjects in a format agreeable to students. These productions:

- Are graphics-oriented simulations, including 2D and 3D simulations.
- Can realistically reproduce or simulate natural phenomena and real-life events. Flight simulators are excellent examples of such simulations.
- Are highly interactive, requiring an elaborate and efficient graphical user interface (GUI). The development of a GUI requires the management of windows, menus, dialog boxes, and hardware resources including keyboards, mice, and display monitors.

- React in real time. The implementation of such simulations requires a thorough knowledge of computer hardware and computer languages.
- Are story-based simulations requiring a plot in which game objects must interact intelligently with each other. Therefore, in order to make games challenging and interesting, students must design and implement good artificial intelligence algorithms, which serve as the cognitive processes for the computer-controlled game objects.
- Could be designed for either a single-player or multi-player environment. The development of the latter requires the understanding of subjects such as computer networks, TCP/IP, and Internet programming.
- Are excellent examples of large and complex productions. Teamwork is essential to the successful completion of such productions. Therefore, students are divided into teams and are rigorously trained in object-oriented programming languages, paradigms, and software engineering techniques and practices.

Graduates of this program will gain the skills required to successfully pursue entry-level careers in the rapidly growing world of computer technologies in general, and computer graphics and simulations in particular. This degree prepares students to work in the computer and video game industry as intermediate-level programmers in graphics, artificial intelligence, networking, or general programming; beginning designers; or engineering tool staff members. Some of the job titles that graduates of this program may aspire to are Solutions Architect, Compatibility/Playability Design Engineer, Game Analyst, Quality Assurance Engineer, Quality Assurance Supervisor, Computer or Software Programmer, Software Engineer, Game Programmer, Engine and Tools Programmer, Game Graphics Programmer, Artificial Intelligence Programmer, Audio Programmer, Web Programmer, or Software/Lead Design Engineer.

Rather than attempt to provide a broad, general education, this degree program is an intensive educational experience in a specialized and highly technical area, and it prepares students for a career in several rapidly expanding industries. Staff and faculty are prepared to guide students desiring more general education course work about supplementary opportunities available through other institutions.

# **Degree Requirements**

#### **Number of Credits and GPA**

The BSCS in RTIS requires completion of at least 154 credits with a cumulative GPA of 2.0 or better. The program usually spans eight semesters of 15 weeks each, or a total of 4 academic years.

#### **Grade Requirements and Core Courses**

Students must receive a grade of "C-" or higher in all core courses for the BSCS in RTIS major. (In a non-core course, a grade of "D" or higher is considered passing.) The core courses are all those taken to fulfill the GAM, MAT, and CS requirements as described below. PHY 200 is also a core course.

#### **Art Requirements**

Students are required to take ART 210, CG 130 and 2 additional credits from the following: ANI 125, ART 400, FLM 115, FLM 151, FLM 152, FLM 275, or ART 410. (Total: 7 credits)

#### **Computer Science Requirements**

The following courses are required: CS 102, CS 120, CS 120L, CS 170, CS 170L, CS 180, CS 200, CS 225, CS 230, CS 250, CS 260, CS 280, CS 300, CS 315, CS 330, CS 350, and CS 365. Students must select four more courses (12 credits) numbered higher than 200 or PHY 350. (Total: 60 credits)

#### Humanities and Social Sciences Requirements

Required courses are COL 101, ENG 110 and COM 150. Five additional ENG credits are required from ENG 116 and above. Students must take an additional three credits in HIS, PSY, or SOS. (Total: 15 credits)

#### **Mathematics Requirements**

The following courses are required: MAT 140, MAT 150 or MAT 180, MAT 200 or MAT 230, MAT 250, MAT 258, MAT 300, and one MAT elective numbered higher than 300, or MAT 256. (Total: 24 credits)

#### **Physics Requirements**

The following courses are required: PHY 200 and PHY 250. (Total: 6 credits)

#### **Projects Requirements**

The following courses are required: GAM 100, GAM 150, GAM 200, GAM 250, GAM 300, GAM 350, GAM 400, and GAM 450. (Total: 34 credits)

#### **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: ART 210 (2), ART elective (2), COM 150 (3), ENG 110 (3), ENG electives numbered ENG 116 or higher (5), a social science elective in HIS, PSY, or SOS (3), MAT 150 or MAT 180 (4), MAT 250 (3), PHY 200 (3), and PHY 250 (3), for a total of 31 credits.

#### **Recommended Course Sequence Chart**

(BSCS in RTIS) [Updated 2012]

Semester	Course	Course Title	Core*	Credits
	MAT 140	Linear Algebra and Geometry	Х	4
	CS 102	Computer Environment	Х	4
<del></del>	CS 120	High-Level Programming I – The C Programming Language	Х	3
Semester 1	CS 120L	High-Level Programming I Lab	Х	1
eme	GAM 100	Project Introduction	Х	3
õ	ENG 110	Composition		3
	COL 101	College Life and Academic Skills		1
			Semester Total	19
	MAT 150 or MAT 180	Calculus and Analytic Geometry I or Vector Calculus I	Х	4
2	CS 170	High-Level Programming II – The C++ Programming Language	Х	3
Semester 2	CS 170L	High-Level Programming II Lab	Х	1
mes	CS 230	Game Implementation Techniques	Х	3
Se	GAM 150	Project I	Х	3
	COM 150	Interpersonal and Work Communication		3
			Semester Total	17
	MAT 200 or MAT 230	Calculus and Analytic Geometry II or Vector Calculus II	Х	4
e	CS 180	Operating System I, Man-Machine Interface	Х	3
ster	CS 200	Computer Graphics I	Х	3
Semester 3	CS 225	Advanced C/C++	Х	3
Se	GAM 200	Project II	Х	4
	PHY 200	Motion Dynamics	Х	3
			Semester Total	20
	PHY 250	Waves, Optics, and Aerodynamics		3
	CS 250	Computer Graphics II	Х	3
er 4	CS 260	Computer Networks I, Interprocess Communication	Х	3
Semester 4	CS 280	Data Structures	Х	3
Sen	GAM 250	Project II	Х	4
	MAT 250	Linear Algebra	Х	3
			Semester Total	19

Semester	Course	Course Title	Core*	Credits
	CS 300	Advanced Computer Graphics I	Х	3
	CS 315	Low-Level Programming	Х	3
Semester 5	CS 330	Algorithm Analysis	Х	3
nest	MAT 258	Discrete Mathematics	Х	3
Sen	CG 130	3D Computer Animation Production I		3
	GAM 300	Project III	Х	5
			Semester Total	20
	MAT 300	Curves and Surfaces	Х	3
	CS 350	Advanced Computer Graphics II	Х	3
	CS 365	Software Engineering	Х	3
Semester 6	Computer Science or Physics Elective	Any 200-level or higher CS course not required or PHY 350	Х	3
	GAM 350	Project III	Х	5
	Elective	An elective of the student's choice from any department at DigiPen		3
			Semester Total	20
	Art Elective	Select one: ANI 125, ART 400, FLM 115, FLM 151, FLM 152, FLM 275, or ART 410		2-3
	English Elective	One English elective chosen from any ENG course, ENG 116 and above		2-4
Semester 7	Computer Science or Physics Elective	Any 200-level or higher CS course not required or PHY 350	Х	3
Sem	Math Elective	MAT 256 or any MAT course greater than 300	Х	3
	GAM 400	Project IV	Х	5
	Elective	An elective of the student's choice from any department at DigiPen		3
	ART 210	Art Appreciation		2
			Semester Total	20-23
	English Elective	One English elective chosen from any ENG course, ENG 116 and above		2-4
	Computer Science or Physics Elective	Any 200-level or higher CS course not required or PHY 350	Х	3
Semester 8	Computer Science or Physics Elective	Any 200-level or higher CS course not required or PHY 350	X	3
	GAM 450	Project IV	Х	5
	Elective	An elective of the student's choice from any department at DigiPen		3
	HSS Elective	One humanities & social science elective from any three-credit HIS, PSY or SOS courses		3
		·	Semester Total	19-21
			Degree Total	154 minimur

\*Note: Please see the Degree Requirements for an explanation of core courses.

# GAME DESIGN DEGREE PROGRAMS

#### [Updated 2012] Overview

The designers of digital entertainment fill a unique role that combines art, technology, innovation, storytelling, history, psychology, and many other disciplines. This multidisciplinary program leads to one of two degrees: the Bachelor of Science in Game Design (BSGD) and the Bachelor of Arts in Game Design (BAGD). At DigiPen, both of these degree programs are designed to educate students to become game developers with the skills necessary to design levels, games, systems, and characters. In addition, the BSGD prepares students to become technical designers with the skills necessary to program games, behaviors, and user interfaces. On the other hand, the BAGD prepares students to become artistic designers with the skills necessary to create interesting stories, worlds, environments, and visuals. Students graduating with either degree will be prepared to begin working in the computer software and video games industries.

Students in the Game Design degree programs learn how to apply the software, tools, and processes used in this industry to challenging problems that practitioners in the field regularly encounter. They learn communication skills, both written and verbal, and practice those skills through presentations, proposals, and design documents. Like other DigiPen degree programs, students in the Game Design degree programs participate in several team-based projects. These projects are designed to give students concrete experiences in which they apply the theoretical knowledge gained from their other courses and emphasize teamwork, accountability, commitment, and testing. Game Design students gain the experience of designing, building, testing, and polishing a variety of games, including dice games, card games, board games, role-playing games, digital and nondigital simulations, 2D digital games, and 3D digital games.

# BACHELOR OF SCIENCE IN GAME DESIGN

#### [Updated 2012] Program Overview

This degree program prepares graduates to design and build interactive digital entertainment. Graduates will be well versed in game design theory for digital and non-digital games, level design, system design, and behavior design. Graduates will have extensive experience testing, iterating, and polishing both digital and non-digital designs. Graduates will also be familiar with the tools commonly used in the industry by designers, artists, producers, and programmers, including level editors, drawing software, modeling software, scheduling tools, compilers, and databases. This interdisciplinary degree also provides a foundation in mathematics and the humanities.

The game industry requires designers to be versatile and skilled in more than just design. Technical designers must be able to implement designs, so the BSGD program stresses the importance of being able to write computer programs in core languages such as C and C++, as well as the scripting languages commonly used by technical designers. Graduates will be well versed in programming game logic, user interfaces, artificial intelligence, databases, and design tools.

Graduates of this degree program will be prepared to work in the video game industry as entry-level programmers, artificial intelligence programmers, user interface programmers, tools programmers, scripters, level designers, system designers, and game designers. Some of the job titles that graduates of this program may aspire to are Computer or Software Programmer, Software Engineer, Gameplay Programmer, Artificial Intelligence Programmer, User Interface Programmer, Tools Programmer, Game Scripter, Level Designer, System Designer, Content Designer, Technical Designer, Game Designer, Design Director, and Creative Director.

# **Degree Requirements**

#### Number of Credits and GPA

The Bachelor of Science in Game Design (BSGD) requires completion of at least 154 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.

#### **Grade Requirements and Core Courses**

Students must receive a grade of "C-" or higher in all core courses for the Bachelor of Science in Game Design. (In a non-core course, a grade of "D" is considered passing.) The core courses are defined as follows: all courses taken to fulfill the Projects, Mathematics, Computer Science, and Physics requirements, PSY 101, ENG 110, ENG 120.

#### **Art Requirements**

The following courses are required: ART 101 or ART 102, ART 125 or ART 126, ART 260, ART 310, CG 102 or CG 201, and CG 125 or CG 225. (Total: 18 credits)

#### **Computer Science Requirements**

The following courses are required: CS 101 or CS 102, CS 120, CS 120L, CS 170, CS 170L, CS 180, CS 225, CS230, CS 251, CS 280, CS 311, CS 330, and CS 380. (Total: 33 credits)

#### **Electives Requirements**

At least five credits from any courses in any departments at DigiPen. (Total: 5 credits)

#### Humanities and Social Science Requirements

The following courses are required: COL 101, COM 150, ENG 110, ENG 120, and PSY 101. Three additional credits must be selected from other courses with the designation COM, ENG, ECN, HIS, LAW, PHL, PSY, or SOS. (Total: 16 credits)

#### **Mathematics Requirements**

The following courses are required: MAT 140, MAT 150 or MAT 180, MAT 200 or MAT 230, MAT 258, and MAT 364. (Total: 18 credits)

#### **Physics Requirements**

One course is required: PHY 200. (Total: 3 credits)

#### **Projects Requirements**

The following courses are required: GAM 100, GAM 150, GAM 200, GAM 250, GAM 302, GAM 352, GAT 110, GAT 210, GAT 211, GAT 212, GAT 240, GAT 250, GAT 251, GAT 315, and GAT 316. Two courses from the following list are also required: GAM 375, GAM 390, GAM 400, GAM 450, and GAM 490. (Total: 61 credits)

#### **Note on General Education Courses**

The following courses satisfy the general education requirement for the Bachelor of Science in Game Design: COM 150 (3), ENG 110 (3), ENG 120 (3), MAT 140 (4), MAT 150 or MAT 180 (4), MAT 200 or MAT 230 (4), MAT 258 (3), PHY 200 (3), PSY 101 (3), and one Humanities and Social Sciences elective (3), for a total of 34 credits..

#### **Recommended Course Sequence Chart**

(BSGD) [Updated 2012]

Semester	Course	Course Title	Core*	Credits
	CS 101	Introduction to Computer Environment	Х	1
	CS 120	High-Level Programming I – The C Programming Language	X	3
	CS 120L	High-Level Programming I Lab	Х	1
er 1	ENG 110	Composition	X	3
Semester 1	GAM 100	Project Introduction	Х	3
Sen	GAT 110	Game History	Х	3
	MAT 140	Linear Algebra and Geometry	X	4
	PSY 101	Introduction to Psychology	Х	3
			Semester Total	21
	COL 101	College Life and Academic Skills		1
	CS 170	High-Level Programming II – The C ++ Language	Х	3
	CS 170L	High-Level Programming II Lab	X	1
0	CS 230	Game Implementation Techniques	Х	3
Semester 2	ENG 120	Research, Reasoning, and Writing	Х	3
mes	GAM 150	Project I	X	3
Se	GAT 210	Game Mechanics I	Х	3
	MAT 150	Calculus and Analytic Geometry I or Vector Calculus I	X	4
	or MAT 180			
	MAT 160		Semester Total	21
	CS 225	Advanced C/C L		
	CS 225	Advanced C/C++	X	3
	CS 180	Operating System I, Man-Machine Interface	X	3
r S	MAT 200 or	Calculus and Analytic Geometry II or Vector Calculus II	X	4
este	MAT 230			
Semester 3	PHY 200	Motion Dynamics	Х	3
0)	GAT 211	Game Mechanics II	Х	3
	GAM 200	Project II	Х	4
			Semester Total	20
	CS 280	Data Structures	Х	3
	COM 150	Interpersonal and Work Communication		3
er 4	ART 102	Fundamentals of Visual Expression		3
Semester 4	GAT 212	Advanced Game Mechanics	Х	3
Sem	GAT 240	Technology for Designers	Х	3
	GAM 250	Project II	Х	4
		·	Semester Total	19

Semester	Course	Course Title	Core*	Credits
	CS 380	Artificial Intelligence for Games	Х	3
	CS 251	Introduction to Computer Graphics	X	3
er 5	ART 126	Principles of Composition and Design		3
Semester 5	ART 260	Graphic Design, User Experience, and Input		3
Sen	GAT 250	2D Game Design I	Х	3
	GAM 302	Project for Game Designers	Х	5
			Semester Total	20
	ART 310	Architectural Spaces, Design, and Lighting I		3
	CG 125	Introduction to 3D Production for Designers		3
er 6	CG 102	2D Raster and Vector Graphics for Designers		3
Semester 6	GAT 251	2D Game Design II	Х	3
Sen	GAM 352	Project for Game Designers	Х	5
	MAT 258	Discrete Mathematics	Х	3
			Semester Total	20
	CS 330	Algorithm Analysis	Х	3
	GAT 315	3D Game Design I	Х	3
er 7	Elective	An elective of the student's choice from any department at DigiPen		3
Semester 7	CS 311	Introduction to Databases	X	3
Sem	MAT 364	Combinatorial Game Theory	Х	3
	GAM 400	Project IV	X	5
			Semester Total	20
	GAT 316	3D Game Design II	Х	3
8	Elective	An elective of the student's choice from any department at DigiPen		2-3
Semester 8	HSS Elective	Any three-credit COM, ENG, ECN, HIS, LAW, PHL, PSY, or SOS course.		3
Se	GAM 450	Project IV	Х	5
			Semester Total	13-14
			Degree Total	154 minimum

\*Note: Please see the Degree Requirements for an explanation of core courses.

# BACHELOR OF ARTS IN GAME DESIGN

#### [Updated 2012] Program Overview

This degree program prepares graduates to design and build interactive digital entertainment. Graduates will be well versed in game design theory for digital and non-digital games, level design, system design, and general art skills. Graduates will have extensive experience testing, iterating, and polishing both digital and non-digital designs. Graduates will also be familiar with the tools commonly used in the industry by designers, artists, and producers, including level editors, drawing software, modeling software, and scheduling tools. This interdisciplinary degree also provides a foundation in computer programming and the humanities.

The game industry requires designers to be versatile and skilled in more than just design. Artistic designers must be able to create written or visual content, so the BAGD program allows students to select either an emphasis in visual design or an emphasis in writing and storytelling. Graduates with a visual design emphasis will build on their general art skills and be able to create art assets for games, such as vector art, textures, and models. Graduates with a writing and storytelling emphasis will build on their general writing skills and be able to create characters, history, dialogue, and interactive stories for games.

Graduates of this degree program will be prepared to work in the video game industry as entry-level writers, scripters, level designers, system designers, and game designers. Some of the job titles that graduates of this program may aspire to are Writer, Artist, Game Scripter, Level Designer, System Designer, User Interface Designer, Content Designer, Quest Designer, Game Designer, Design Director, and Creative Director.

# **Degree Requirements**

#### Number of Credits & GPA

The Bachelor of Arts in Game Design (BAGD) requires completion of at least 147 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.

#### **Grade Requirements and Core Courses**

Students must receive a grade of "C-"or higher in all core courses for the BAGD major. (In a non-core course, a grade of "D" is considered passing.) The core courses are defined as follows: all courses taken to fulfill the Projects, Art, Mathematics, Computer Science, and Specialization requirements, PSY 101, ENG 110, ENG 120.

#### Art Requirements

The following courses are required: ART 101 or ART 102, ART 110, ART 125 or ART 126, ART 260, ART 310, CG 102 or CG 201, CG 125 or CG 225, FLM 151, and FLM 275. (Total: 27 credits)

#### **Computer Science Requirements**

The following courses are required: CS 116, CS 170 or CS 175, and CS 176 or CS 225. A combination of CS 120 and CS 101 or CS 120 and CS 100 can replace CS 116. (Total: 10 credits)

#### **Electives Requirements**

At least two credits from any courses in any departments at DigiPen. (Total: 2 credits)

#### Humanities and Social Science Requirements

The following courses are required: COL 101, COM 150, ENG 110, ENG 120, HIS 100, HIS 150, MGT 451, and PSY 101. Three additional credits must be selected from other courses with the designation COM, ENG, ECN, HIS, LAW, PHL, PSY, or SOS. (Total: 25 credits)

#### **Mathematics Requirements**

Students must take MAT 103. (Total: 4 credits)

#### **Projects Requirements**

The following courses are required: GAM 100, GAM 152, GAM 202, GAM 252, GAM 302, GAM 352, GAT 110, GAT 210, GAT 211, GAT 212, GAT 240, GAT 250, GAT 251, GAT 315, GAT 316, GAT 330, and GAT 405. Two courses from the following list are also required: GAM 375, GAM 390, GAM 400, GAM 450, and GAM 490. (Total: 61 credits)

#### **Science Requirements**

Students must take PHY 115 or PHY 200. (Total: 3 credits)

#### **Specialization**

Students are required to take 15 credits of "specialization" courses, which must be selected from any of the following offered at DigiPen: any ENG, ART, CG, or ANI course, any 200 level or higher FLM, SOS, HIS, PHL, PSY, MAT, CS, PHY, or BIO course. The following cannot be counted as "specialization" courses: ENG 450, ART 210, ART 299, ART 400, ART 410. (Total: 15 credits)

#### **Note on General Education Courses**

The following courses satisfy the general education requirement for the BAGD: ART 110 (3), COM 150 (3), ENG 110 (3), ENG 120 (3), HIS 100 (3), HIS 150 (3), MAT 103 (4), PSY 101 (3), PHY 115 or PHY 200 (3), and one Humanities and Social Sciences elective (3), for a total of 31 credits.

#### **Recommended Course Sequence Chart**

(BAGD) [Updated 2012]

Semester	Course	Course Title	Core*	Credits
	COL 101	College Life and Academic Skills		1
	ENG 110	Composition	Х	3
-	CS 116	Introduction to Computer Technology and Programming	Х	4
ster	GAM 100	Project Introduction	X	3
Semester 1	GAT 110	Game History	Х	3
Ň	PSY 101	Introduction to Psychology	Х	3
	MAT 103	Precalculus with Discrete Mathematics	Х	4
			Semester Total	21
	ART 102	Fundamentals of Visual Expression	Х	3
	ENG 120	Research, Reasoning, and Writing	Х	3
er 2	GAT 210	Game Mechanics I	Х	3
Semester 2	GAM 152	Scripting Project	X	3
Serr	CS 175	Scripting Languages	X	3
	PHY 115	Introduction to Applied Math and Physics		3
			Semester Total	18
	GAM 202	Game Usability and Analysis	Х	1
	FLM 151	Visual Language and Film Analysis		3
e	CS 176	Advanced Scripting	X	3
Semester 3	GAT 211	Game Mechanics II	Х	3
me	GAT 250	2D Game Design I	Х	3
Š	ART 126	Principles of Composition and Design	Х	3
	ART 110	Fundamentals of Visual Communication and Design Process	X	3
			Semester Total	19
	GAT 251	2D Game Design II	Х	3
	GAM 252	Advanced Usability and Process	Х	1
4	ART 310	Architectural Spaces, Design, and Lighting I	Х	3
Semester 4	COM 150	Interpersonal and Work Communication		3
eme	GAT 212	Advanced Game Mechanics	Х	3
Š	CG 102	2D Raster Graphics and Animation for Designers	Х	3
	CG 125	Introduction to 3D Production for Designers	Х	3
			Semester Total	19

Semester	Course	Course Title	Core*	Credits
	GAT 315	3D Game Design I	X	3
	Specialization Course	Any course from the "specialization" list.	X	3
er 5	FLM 275	Fundamentals of Music and Sound Design		3
Semester 5	Specialization Course	Any course from the "specialization" list.	X	3
0	ART 260	Graphic Design, User Experience, and Input	X	3
	GAM 302	Project for Game Designers	X	5
			Semester Total	20
	Specialization Course	Any course from the "specialization" list.	X	3
9	GAT 316	3D Game Design II	X	3
ster	GAT 240	Technology for Designers	X	3
Semester 6	Specialization Course	Any course from the "specialization" list	X	3
	GAM 352	Project for Game Designers	X	5
			Semester Total	17
	HIS 100	Introduction to World History		3
	GAT 330	Interactive Narrative and Character Creation for Games	X	3
ter 7	GAT 405	Advanced Game Design	X	3
Semester 7	Specialization Course	Any course from the "specialization" list.	x	3
••	GAM 400	Project IV	X	5
			Semester Total	17
	HIS 150	Introduction to World History II		3
8	HSS Elective	Any three-credit course from the Department of Humanities and Social Sciences offered at DigiPen		3
este	Elective	An elective of the student's choice from any department at DigiPen.		2-3
Semester 8	MGT 451	Project Management		3
	GAM 450	Project IV	Х	5
			Semester Total	16-17
		Dec	ree Program Total	147 minimun

\*Note: Please see the Degree Requirements for an explanation of core courses.

# BACHELOR OF FINE ARTS IN DIGITAL ART AND ANIMATION

#### [Updated 2012] Program Overview

As the animation and video game industries mature, there is a noticeable shift by companies to hire employees who demonstrate more than a working knowledge of a specific commercial software package or traditional artistic skills. Industry-quality standards continue to rise, and competition for entry-level positions demands that artists possess sophisticated skill sets before they can even begin their careers. Studios seek artists with a broad and integrated foundation of theoretical, practical, and technical skills in production animation, traditional art, modern computer software, and media story flow. Insight and long-term potential have become increasingly important. The studios also demand professional accountability and consistency.

Digital art and animation remain viable career opportunities for graduates possessing these abilities. Animation is capable of solving informational, educational, and entertainment problems no other discipline can resolve. It provides a cornerstone for many industries including cinema, broadcast entertainment, cable television, software development, the Internet, education, simulation, product design, research, forensic science, architecture, telecommunications, advertising, travel and tourism, and video games. The fact that these industries depend upon qualified candidates accentuates the need for quality digital art and animation education.

The broad scope of these demands presents a series of significant academic challenges. Most art students enter collegiate training with little or no substantial background knowledge relative to this field. Many secondary schools have been forced to cut back on the level of arts training that they are able to provide. Consequently aspiring artists must acquire this foundation while they are also trying to establish their professional focus. The complexity of the individual components of this field demand highly structured curricula and programmed sequencing simply to enable most students to be successful. Some students are capable of the rapid assimilation of the integrated knowledge the studios now require, but most are better served by a deeper and more sequential approach to the material.

DigiPen's Bachelor of Fine Arts in Digital Art and Animation seeks to address these needs. Examples of student projects can be found in the DigiPen's Digital Gallery. Students who successfully complete this curriculum will possess the following skills and appropriate samples of professional work:

- A broad foundation of production experiences in both 2D and 3D art and animation. This base allows students to gain an overview of the profession and provides long-term adaptability.
- An area of production emphasis and focus. This enables students to target a specific sector of the industry upon graduation. Each student will produce a portfolio to support this focus.
- Strong foundational skills in storytelling. This includes visual storytelling, literary traditions, story through dialog, story through acting, and cinematic conventions.

- Strong foundational skills in applied technology using industry-standard hardware and software.
   Students will be thoroughly familiar with modern interface and workflow conventions. They will also understand how to learn new software while maintaining a production schedule.
- A solid foundation in professional work habits and attitude. Students will understand how to utilize and integrate professional criticism into their work. Additionally, they will be able to identify and create work that meets professional quality standards. They will also understand production flow and be able to generate and maintain appropriate schedules and production goals for their work.
- Social perspective and civic accountability relative to the roles that animation plays in society. Students will explore the long-term ramifications of this industry and be able to intelligently discuss their responsibilities to the betterment of the animation industry and society as a whole.

This degree prepares a graduating student for a career in digital art and digital 3D animation, digital 2D animation, and video game or animation pre-production. Some of the careers for which graduates of the BFA in Digital Art and Animation are trained include Props and Environment Modelers, Texture Artists, Level Designers, Character Modelers, Character Riggers, Character Animators, 3D Lighting and Camera Design, Effects Animator, Conceptual Illustration and Character Design, and Storyboard Artists.

# **Degree Requirements**

#### Number of Credits and GPA

The Bachelor of Fine Arts in Digital Art and Animation requires completion of at least 145 credits with a cumulative GPA of 2.0 or better. Courses are either mandatory or elective and must in either case be passed with a final grade of C- or better (2.0 GPA). The program usually spans eight semesters of 15 weeks each, or four academic years.

#### **Grade Requirement and Core Courses**

Certain non-elective courses which are part of the DigiPen BFA course sequence are survey or introductory courses intended to widen the student's understanding and educational experience but are additional to, not central to the degree. These courses (SOS 115, PHY 115, CS 115, and LAW 115) are all 100 level courses which are not taught during the first year of the degree program. As such they are considered to be non-core classes and the grading protocols for non-core courses apply (i.e., credit is given if the class is passed with a grade of "D" or better). All other courses, required or elective, are core courses and students must receive a grade of "C-" or higher to pass.

#### **Animation Requirements**

The following animation courses are required: ANI 101, ANI 125, and ANI 151. (Total: 9 credits)

#### **Art Requirements**

The following art courses are required: ART 101, ART 110, ART 115, ART 125, ART 151, ART 201, ART 251, ART 300, ART 350, ART 401, and ART 450. (Total: 34 credits)

#### **Computer Graphics Requirements**

The following computer graphics courses are required: CG 201, CG 225, CG 275, and CG 300. (Total: 12 credits)

#### **Elective Requirements**

Students must take a minimum of 24 credits from any DigiPen courses excluding the following: ART 102, ART 126, ART 210, ART 400, CG 102, CG 125, CG 130, CG 135. (Total: 24 credits)

#### **Film Requirements**

The following film courses are required: FLM 115, FLM 151, and either FLM 201 or FLM 210. (Total: 9 credits)

#### Humanities and Social Science Requirements

The following courses are required: COL 101, LAW 115, SOS 115, ENG 116, and ENG 315. (Total: 15 credits)

#### **Projects Requirements**

The following projects courses are required: PRJ 201, PRJ 251, PRJ 300, PRJ 350, PRJ 400, and PRJ 450. Please note that INT 390 and INT 450, internship courses, may be taken in place of PRJ 400 and PRJ 450. (Total: 30 credits)

#### **Science Requirements**

The following courses are required: CS 115, PHY 115, BIO 150, BIO 200. (Total: 12 credits)

#### **Note on General Education Courses**

The following courses satisfy the general education requirement for the BFA in Digital Art and Animation: ART 110 (3), ART 115 (4), (3), ENG 116 (4), ENG 315 (4), FLM 115 (3), LAW 115 (3), SOS 115 (3), CS 115 (3), and PHY 115 (3), for a total of 30 credits.

#### **Recommended Course Sequence Chart**

(BFA) [Updated 2012]

Semester	Course	Course Title	Core*	Credits
<del>7</del>	ANI 101	Introduction to Animation - Theories and Techniques I	Х	3
	ART 101	The Language of Drawing	X	3
	ART 110	Fundamentals of Visual Communication and Design Process	X	3
ster	ART 115	Art and Technology	X	4
Semester 1	ENG 116	Storytelling	X	4
õ	FLM 115	History of Film and Animation	X	3
	COL 101	College Life and Academic Skills		1
			Semester Total	21
	ANI 125	Acting for Animation	X	3
	ANI 151	Advanced Animation - Theories and Techniques II	X	3
er 2	ART 125	Tone, Color, and Composition	X	3
Semester 2	ART 151	Basic Life Drawing	X	3
Serr	BIO 150	Human Muscular, Skeletal, and Kinetic Anatomy	X	3
	FLM 151	Visual Language and Film Analysis	X	3
			Semester Total	18
	ART 201	Advanced Life Drawing	X	3
e	BIO 200	Animal Muscular, Skeletal, and Kinetic Anatomy	X	3
Semester 3	CG 201	2D Raster Graphics and Animation	X	3
eme	CG 225	Introduction to 3D Animation	X	3
Ň	PRJ 201	2D Animation Production	X	5
			Semester Total	17
	FLM 201 or FLM 210	Cinematography or Cinematography for Visual Effects.	x	3
	ART 251	Character Design	X	3
er 4	ART 350	Storyboards	Х	3
Semester 4	CG 251 or Elective	2D Vector Animation Production or **any course from the Elective Requirements list.	х	3
	CG 275	3D Character Animation	Х	3
	PRJ 251	2D Vector Animation	Х	5
			Semester Total	20

Semester	Course	Course Title	Core*	Credits
Semester 5	ANI 300 or Elective	Acting through an Interface or **any course from the Elective Requirements list.	x	3
	ART 300	Perspective, Backgrounds, and Layouts	Х	3
	CG 300	3D Environment and Level Design	Х	3
Sei	ENG 315	Story Through Dialogue	Х	4
	PRJ 300	Limited-Scope 3D Production	X	5
			Semester Total	18
	ANI 350 or Elective	Voice Acting for Animation or **any course from the Elective Requirements list.	x	3
Semester 6	ART 225 or Elective	3D Design and Sculpture or **any course from the Elective Requirements list.	x	3
mes	PHY 115	Introduction to Applied Math and Physics		3
Sei	CG 350 or Elective	Graphics for Gaming or **any course from the Elective Requirements list.	х	3
	PRJ 350	3D Animation Production	X	5
			Semester Total	17
	ART 401	Conceptual Illustration and Visual Development	X	3
4	FLM 250 or Elective	Digital Post-Production or **any course from the Elective Requirements list.	x	3
Semester 7	FLM 275 or Elective	Fundamentals of Music and Sound Design or **any course from the Elective Requirements list.	x	3
	ART 450	Portfolio	X	3
	PRJ 400	Capstone Project I	Х	5
			Semester Total	17
	ANI 400 or Elective	Cinematic Animation or **any course from the Elective Requirements list.	x	3
ter 6	SOS 115	Media and Ethics: A Social Science Perspective		3
Semester 8	CS 115	Introduction to Scripting and Programming		3
Sel	LAW 115	Introduction to Intellectual Property and Contracts		3
	PRJ 450	Capstone Project II	Х	5
			Semester Total	17
			Degree Total	145 minimum

\*Note: Please see the Degree Requirements for an explanation of core courses.

\*\*Note: Please refer to the Elective Requirements.

# **Course Descriptions for the Academic Year 2012-2013**

# DEPARTMENT OF ANIMATION AND PRODUCTION

# **Animation Courses**

[Updated 2012]

#### ANI 350 Voice Acting for Animation (3 Cr.)

Prerequisite(s): ANI 300

This course explores the nature of acting through the medium of the human voice. The curriculum explores narration, expressive reading, diction, and vocal refinement. It introduces students to basic audio technology and recording equipment. The course also covers lipsynchronization techniques in animation and culminates in a series of practical exercises in both 2D and 3D animation.

[Updated 2012]

#### ANI 399 Special Topics in Animation (3 Cr.)

Prerequisite(s): PRJ 251

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.

# DEPARTMENT OF COMPUTER SCIENCE

# **Computer Science Courses**

[Updated 2012]

#### CS 170 High-Level Programming II - The C++ Programming Language (3 Cr.)

Prerequisite(s): CS 120 & CS 120L Concurrent Course(s): CS 170L

This course is a continuation of High-Level Programming I (CS 120). It introduces the C++ language with particular emphasis on its object-oriented features. Topics covered include stylistic and usage differences between C and C++, namespaces, function and operator overloading, classes, inheritance, class and function templates, STL lists, and vectors. Concurrent enrollment in CS 170L is required.

[Updated 2012]

#### CS 175 Scripting Languages (3 Cr.)

Prerequisite(s): CS 116 or CS 120 & CS 120L

This course covers the concepts and implementation strategies for using high-level scripting languages in game development. Students will focus on object-oriented programming, high-level English-like structure, speed of development, and ease of use. The course includes a survey of commercial languages, as well as proprietary scripting languages from industry applications. Students will examine the process of conceptualizing a syntax for a game-based scripting language and examine how such a language is compiled and interpreted by a game engine. Using the syntax they have created, they will create a number of scripts that could be used in a game. Additionally, the class will cover such relevant topics as data-driven technology, modular coding, function calls, and procedures.

#### [Updated 2012]

#### CS 176 Advanced Scripting (3 Cr.)

Prerequisite(s): CS 170 & CS 170L, or CS 175

This course presents game implementation techniques and game architecture in a scripting language environment. Students investigate concepts of game architecture, such as game-system component separation and game flow while learning about essential elements such as the game state manager, input/output handler, and frame rate controller. Students learn how to create several different types of classic games in a variety of scripting languages most commonly used for professional games, learning the specific syntax and approaches of each language in the process. As part of their implementation, students learn how to use the specific graphics, audio interface, physics and math APIs found in the scripting environments used. Students survey concepts in space partitioning, particle systems, map editors and other elements so that they are capable of creating working prototypes of 2D games.

#### [Updated 2012]

# CS 180 Operating System I, Man-Machine Interface (3 Cr.)

Prerequisite(s): CS 101 or CS 102, & CS 120 & CS 120L

This course presents an overview of modern operating systems, in particular Windows and Linux/Unix as implemented on modern PCs. After an overview of what an operating system is and does, the following is also covered: organization and design (the kernel and various subsystems), process management (creation and management of processes and threads, including an introduction to multi-threaded programming), networks (the TCP/IP stack and the organization of the Internet), interprocess communication, process synchronization (locks, semaphores, and methods to avoid deadlocks), memory management (hardware and process views of memory layout and demand-paged virtual memory), file systems, and security and protection (viruses, worms, and Trojan horses).

#### [Updated 2012]

#### CS 200 Computer Graphics I (3 Cr.)

Prerequisite(s): CS 170 & CS 170L, & MAT 140

CS 200 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.

#### [Updated 2012]

#### CS 225 Advanced C/C++ (3 Cr.)

Prerequisite(s): CS 170 & CS 170L

This course builds on the foundation created in the first two high-level programming courses (CS 120/170). It presents advanced topics of the C/C++ programming language in greater detail. Such topics include advanced pointer manipulation, utilizing multi-dimensional arrays, complex declarations, and standard library functions. Advanced C++ topics include class and function templates, operator overloading, multiple inheritance, runtime type information, the standard template library, and performance issues.

#### [Updated 2012]

# CS 230 Game Implementation Techniques (3 Cr.)

Prerequisite(s): CS 120 & CS 120L Concurrent Course(s): CS 170

CS 230 presents game implementation techniques and engine architecture. Students investigate foundational concepts of game architecture, such as game-system component separation and game flow, while learning about essential elements such as the game state manager, input/output handler, and frame rate controller. CS 230 introduces Windows programming, state machines, and collision detection algorithms, which students will integrate into their own remakes of classic games. As part of their implementation, students create and expand their own collision, vector, and matrix libraries, enabling them to incorporate basic physics engines. Students survey concepts in space partitioning, particle systems, map editors, and other elements as a bridge to more advanced concepts in implementation techniques and engine architecture.

#### [Updated 2012]

# CS 245 Introduction to Interactive Sound Synthesis (3 Cr.)

Prerequisite(s): CS 170 & CS 170L, CS 180, MAT 140, & PHY 200

This course explores dynamic sound synthesis, 3D-directional auditory effects, and sonic ambience to real-time simulations and video games. The subjects include mixing audio and modulating dry recorded sounds using wave table synthesis. Students learn how to create collision sounds using additive synthesis, wind effects using subtractive synthesis, natural sounds using granular synthesis and physical modeling, ambiences using layering and spectral filtering, 3D spatialized surround sound panning, inter-aural time difference, inter-aural intensity difference, and Head Related Transforms (HRTFS). Students also study algorithms and techniques for real-time multithreaded programming and synthesized sound integration for game engines.

### CS 246 Advanced Sound Synthesis (3 Cr.)

Prerequisite(s): CS 245

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.

#### [Updated 2012]

# CS 251 Introduction to Computer Graphics (3 Cr.)

Prerequisite(s): CS 170 & CS 170L

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 engine 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.

#### [Updated 2012]

# CS 260 Computer Networks I, Interprocess Communication (3 Cr.)

Prerequisite(s): CS 170 & CS 170L

This course introduces the hierarchical network communication in a distributed computing environment. Course topics cover network technologies, architecture, and protocols. The curriculum gives specific emphasis to the TCP/IP stack and in making students familiar with writing portable socket based software. It prepares students for programming multi-player games in later semesters.

#### [Updated 2012]

#### CS 311 - Introduction to Databases (3 Cr.)

Prerequisite(s): CS 170 & CS 170L

This course provides students with a broad overview of database systems. It presents the fundamentals, practices, and applications of computer databases. Topics include database architectures, data modeling, design schemes, relational algebra, query languages, transaction processing, and database implementation. Students will explore massively multiplayer online games (MMOG) to examine a case study of database design and implementation.

#### [Updated 2012]

#### CS 315 Low-Level Programming (3 Cr.)

Prerequisite(s): CS 102, CS 120 & CS120L, & CS 180

This course introduces students to modern microprocessor architectures using x86 series for case studies. In this course, students are expected to write both assembly language programs and to use assembly language to optimize various C/C++ programs. Topics may include pipelining, superscalar/VLIW machines, register-renaming, out-of-order execution, multi-core architecture, caches, multicore-cache coherency, x86 instruction set architecture, application binary interfaces, Flynn's taxonomy, and Streaming SIMD extensions.

# DEPARTMENT OF DIGITAL ARTS

# **Computer Graphics Courses**

[NEW]

# CG 310 Game Team Art Production I (3 Cr.)

Prerequisite(s): CG 275

This course consists of the production of art for a game team. Students devise a production schedule at the beginning of the course. Evaluation of the art production comes from a faculty member who oversees the production milestones.

#### [NEW]

# CG 311 Game Team Art Production II (3 Cr.)

Prerequisite(s): CG 310

This course is a continuation of CG 310, consisting of the production of art for a game team. Students devise a production schedule at the beginning of this course. Evaluation of the art production comes from a faculty member who oversees the production milestones.

#### [NEW]

#### CG 375 Character Rigging (3 Cr.)

Prerequisite(s): CG 275

This course exposes students to rigging techniques. All students will share models and texture sets and work on learning industry best practices for professional grade character rigs.

# DEPARTMENT OF FINE ARTS

## Art Courses

[NEW]

#### ART 110 Fundamentals of Visual Communication and Design Process (3 Cr.)

#### Prerequisite(s): None

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.

#### [NEW]

#### ART 111 Introduction to Ceramics (3 Cr.)

#### Prerequisite(s): None

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.

#### [NEW]

## ART 222 Ceramics - Hand Building (3 Cr.)

Prerequisite(s): ART 111

This course builds upon hand-building techniques learned in "Introduction to Ceramics". Surface texture techniques and basic mold making will be explored, all while working in the certainty of 3D.

#### [NEW]

#### ART 223 Ceramics - Wheel Throwing (3 Cr.)

Prerequisite(s): ART 111

This course focuses on building skills developed in "Introduction to Ceramics" to produce simple forms on the potter's wheel such as cylinders, bowls and plates.

# DEPARTMENT OF GAME SOFTWARE DESIGN AND PRODUCTION

## **Game Projects Courses**

[Updated 2012]

#### GAM 150 Project I (3 Cr.)

Prerequisite(s): CS 120 & CS 120L, & GAM 100 Credit may be received for either GAM 150 or GAM 152, but not for both.

This project focuses on the creation of a simple game or simulation. Students work together on teams of three or four members. All projects must be written entirely in C (C++ is not allowed) and cannot use external libraries or middleware of any kind (except those provided by the instructor). Topics include effective team communication, planning, documentation, debugging, source control, testing, and iterative software development techniques.

[Updated 2012]

#### GAM 200 Project II (4 Cr.)

Prerequisite(s): CS 170 & CS 170L, CS 230, GAM 150, & MAT 140

This project is divided into two semesters and focuses on the creation of a simple real-time game or simulation with 2D graphics (3D games are not allowed). Students work together on teams of three or four members to implement technical features, such as audio effects, music playback, pattern movement, simple artificial intelligence, same-machine multiplayer (networking is not allowed), 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 basic software architecture, essential development practices, fundamentals of team dynamics, and task prioritization methods.

### Game Design and Development Courses

[Updated 2012]

#### GAT 250 2D Game Design I (3 Cr.)

Prerequisite(s): GAT 210, PSY 101, and either CS 170 & CS 170L, or CS 175

Credit may be received for either GAT 250 or for GAT 305, but not for both.

This course focuses on designing and implementing games using a 2D engine. Students work to create several original games in common genres, such as platformers, shooters, brawlers, or puzzle games. Topics may include aesthetics, level construction, enemy placement, resource placement, player guidance, player controls, scripting, and game mechanics in 2D.

#### GAT 305 2D Level Design (3 Cr.)

Prerequisite(s): CS 170 & CS 170L, or CS 175

Credit may be received for either GAT 305 or for GAT 250, but not for both.

This course is an introduction to level design, focused on how design decisions determine the player experience. Students work to create fully functional levels for one or more professional games. Games used may include any level-centric game with 2D gameplay, such as traditional platformers, real-time strategy games, top-down shooters or brawlers, or isometric RPGs. Topics may include level layout, enemy placement, resource placement, player guidance, and pacing.

#### [Updated 2012]

#### GAT 405 Advanced Game Design (3 Cr.)

Prerequisite(s): GAT 251

This course focuses on one or more advanced game design topics based on the expertise of the instructor. Topics may include art games, music games, social games, educational games, serious games, handheld games, alternative input games, radically innovative games, and more. Students work to create one or more prototypes of a game in the areas being covered, either individually or in teams, as appropriate. Emphasis is heavily placed on innovation and students are encouraged to challenge their assumptions about what games are and what games can be.

# DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

# **College Success Courses**

[NEW]

# COL 101 College Life and Academic Skills (1 Cr.)

Prerequisite(s): None

This course assists students in developing the classroom and communication skills necessary to succeed in both educational and professional situations. (Note: This course may not be used to fulfill program General Education requirements).

# **Economics Courses**

[Updated 2012]

#### ECN 350 Engineering Economics (3 Cr.)

Prerequisite(s): None

This course gives students a sound basis for making economic decisions in business and industry environments. Students learn how to decide which projects are worthwhile, determine priorities, and select components. Topics in this course include present worth, future amounts, cash flows, salvage value, depreciation, rates of return, income tax, basic cost accounting, and funding sources, including venture capital and SBIR. The course also covers the basics of intellectual property, patents, and copyright.

# **English Courses**

[Updated 2012]

#### ENG 110 Composition (3 Cr.)

Prerequisite(s): None

This course focuses on generating and discussing ideas for composition and engages in all stages of the writing process, with emphasis on the development and application of critical thinking skills. The primary focus of the course is developing the ability to construct, write, and revise argumentative/persuasive essays. Assignments may also include other types of writing, such as narrative, descriptive, and comparative essays.

[Updated 2012]

#### ENG 116 Storytelling (4 Cr.)

Prerequisite(s): None

This course covers the principal elements of storytelling including theme, character, perspective, setting, plot, and dialogue. It encompasses both visual and non-visual media, such as short stories, novels, drama, and film. Through a series of creative writing exercises, students practice developing stories with both words and images.

[Updated 2012]

#### ENG 150 Mythology (3 Cr.)

Prerequisite(s): ENG 110 or ENG 116

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.

[Updated 2012]

#### ENG 230 Speculative Fiction (3 Cr.)

Prerequisite(s): ENG 110 or ENG 116

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.

### ENG 245 Introduction to Fiction Writing (3 Cr.)

Prerequisite(s): ENG 110 or ENG 116

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.

#### [Updated 2012]

#### ENG 246 American Ethnic Literatures (3 Cr.)

Prerequisite(s): ENG 110 or ENG 116

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.

[NEW]

#### ENG 250 The Graphic Novel (3 Cr.)

Prerequisite(s): ENG 110 or ENG 116

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 novels, such as stand-along, serial, and adaptative books.

#### [Updated 2012]

#### ENG 315 Story through Dialogue (4 Cr.)

Prerequisite(s): ENG 116 or ENG 245

This course introduces students to the basics of screenplay writing for film beginning with the fundamentals of dramatic structure, story arcs, character arcs, and dialogue. Through a series of related assignments, students experience the process of developing a script of their own and practice their hand at writing dialogue for film. Students will write at least one original pre-production script in screenplay format.

# **Psychology Courses**

[NEW]

#### PSY 201 Cognitive Psychology (3 Cr.)

Prerequisite(s): PSY 101

This course emphasizes emergent research on the theory and dynamics of consciousness and the "cognitive unconscious". Students are exposed to recent research that has led to an unprecedented understanding of higher human cognitive processes such as creativity, learning, perception, information processing, and memory.

#### [NEW]

#### PSY 250 Psychology of Myth (3 Cr.)

Prerequisite(s): PSY 101

This course addresses the meaning of myth from the perspective of Jungian archetypes, archetypal projections as image, the Amplification Method of dream analysis, and Campbell's mythic parallels. Carl Jung and Joseph Campbell had a radical influence on the study of myth, and their influence generated a new understanding of human psychology.

#### [NEW]

# PSY 320 Psychology of Interactive Drama (3 Cr.)

Prerequisite(s): PSY 201, ENG 110 or ENG 116

The course explores the rhetorical patterns and psychological characteristics of dramatic architecture. The course illustrates how neural processes structure the cognitive unconscious, how this structure is related to image projection and perception, and how it contributes to the interactive learning process. Exercises are designed to help students understand the psychology related to character design and personality development, archetypes, conflict, plot patterns, back-story, dialogue, exposition, *lysis*, premise, and the psychological dynamics of human choice

#### [NEW]

#### PSY 350 Psychology of The Media (3 Cr.)

Prerequisite(s): PSY 201

The course explores the psychology of advertising from its emergence, its relationship to the psychology of propaganda, its influence on political thought during the latter half of the 20th century, and its influence on contextual value formations and cultural reality.



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