Cogswell
Polytechnical College

College Catalog

DISCLAIMERS & DISCLOSURES

Catalog Disclaimer

This catalog is intended to provide general information to students and prospective students. The College reserves the right to make changes to this catalog to reflect changes to federal and state regulations and any other changes the College deems necessary.

Disclosures

For more information about our graduation rates, the median debt of students that completed the program, and other important information, please visit our website at
http://www.cogswell.edu/about/disclosures.php

Cogswell Polytechnical College

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PRESIDENT'S WELCOME

Dr. Deborah Snyder,
President & Chief Academic Officer

Cogswell Polytechnical College ("Cogswell College") has a long and distinguished history as a California institution of higher education. Continuously dedicated to preparing its students for success and leadership in the world around it, Cogswell has always been associated with best practice in the industries and communities it serves.

Today, Cogswell's students are educated broadly - in digital arts, engineering, and entrepreneurship - to prepare for converging global industries in such fields as videogames, digital cinema, digital audio, digital animation and the engineering sciences and professions. This combination of the digital arts with engineering and technology, along with a foundation in general education and integrated entrepreneurial skills, means that our students graduate with bachelor's degrees and move quickly into the world. The skills and attitudes they explore and develop here serve them well for professions that are changing almost daily.

Cogswell's faculty members, most of whom have strong industry experience and professional networks, work hard to provide the finest possible academic degree programs. Our staff is committed to creating the best possible learning environment for our students. Our alumni assist us through internships, jobs, workshops and other bridges to industry. These dedicated people work together within a college that is small, specialized, and personal. This is an environment that encourages creativity and exploration, while providing first-rate teaching and technology.

We have an amazing group of students here at Cogswell. These dedicated, hard-working, focused students are gifted with stunning artistic, technological, and visionary talents. One of the best parts of being at Cogswell is working on projects with people who challenge, inspire, and help each other create extraordinary things.

This catalog highlights what we do best here at Cogswell. It provides information about the College, while demonstrating what is possible. All of the artwork in this catalog has been created by Cogswell students. You, too, may find this the place to pursue your academic and creative dreams. We urge you to explore our website and then come to visit our campus. For no matter how good our website, it is no substitute for experiencing the fullness of this special place in person.

Sincerely yours,

Dr. Deborah Snyder

ABOUT COGSWELL COLLEGE

Mission Statement

Cogswell College's mission is to be a leader in providing practical education in the combined disciplines of technology and entrepreneurship. With an emphasis on leadership and a strong focus on new technologies and business models, we prepare graduates for careers in the global economy.

History of the College

The school was opened in August 1888 as a high school with well-equipped departments of technical education for boys and business education for girls. The school operated in this capacity until June 30, 1930, when its status was changed to that of a technical college offering a college-level two-year program.

Founding

Dr. Henry D. Cogswell

Dr. Henry Daniel Cogswell, born in Tolland, Connecticut, March 3, 1820, was a man of both vision and distinguished heritage. The Cogswell family was descended from Alfred the Great and Charlemagne and immigrated to America in 1635 from England. Dr. Cogswell cherished his family crest and motto, "NecSpernoNecTimeo," which means, "I neither despise nor fear."

As his ancestors numbered among America's pioneers, so was Dr. Cogswell's own life one of pioneering and service. Henry D. Cogswell had a humble childhood. It was necessary for young Cogswell to go to work at an early age in the New England cotton mills. After a day's work in the mills, he spent the evening hours reading, writing, and learning arithmetic. Eventually he became a teacher, but after one year, he decided to enter the dental profession. Upon completion of his training at the age of 26, Dr. Cogswell began the practice of dentistry in Providence, Rhode Island.

In 1846, Dr. Cogswell married Caroline E. Richards, daughter of Ruel Richards, a manufacturer in Providence. When gold was discovered in California, Dr. Cogswell followed the pioneering urge he inherited from his ancestors. He left for California by sea and after 152 days aboard the clipper ship "Susan G. Owens" landed in San Francisco on October 12, 1849. Rather than enter the rugged and uncertain business of mining, he practiced dentistry and established a mercantile business in the mining region.

After several successful years of dental practice and real estate investments and buoyed by his ever-present strength of purpose, Dr. Cogswell became one of San Francisco's first millionaires. Dr. Cogswell was a pioneer in his profession as well. In 1847, he designed the vacuum method of securing dental plates. In 1853, he performed the first dental operation in California using chloroform.

On March 19, 1887, Dr. and Mrs. Cogswell executed a trust deed setting apart real property (valued at approximately one million dollars) to establish and endow Cogswell College. It was, as far as is known, the first school of its kind west of the Mississippi River. The purpose of the College as a charitable trust is well expressed in the words of Dr. Cogswell in his presentation address to the first Board of Trustees, which he and Mrs. Cogswell had selected. It is remarkable that his reference to the immediate need for technical training is as true now as it was at that time. He spoke, in part, as follows: "Educated working men and women are necessary to solve the great labor problems that will arise in the future. For the purpose of this education, there is room and need for technical schools in all quarters of our country. For the purpose, then, of providing boys and girls of the state a thorough training in mechanical arts and other industries, we have made the grant, as set forth in these papers, providing for the founding and maintaining of Cogswell College."

ACCREDITATION AND APPROVALS

- WASC Senior College and University Commission (WSCUC)
  http://www.wascsenior.org/

- Cogswell College is approved for participation in federal grant loan and work study programs as well as the Cal Grant program.

- Student and Exchange Visitor Program (SEVP)
  http://www.ice.gov/sevis/

- Cogswell College is approved for the training of veterans by the California State Approving Agency for Veteran's Education (CSAAVE). For benefit eligibility information, call 1-888-GIBILL1.

DEGREES

- Bachelor of Arts in Digital Arts and Animation (DAA)
- Bachelor of Arts in Digital Media Management (DMM)
- Bachelor of Arts in Game Design Art (GDA)
- Bachelor of Science in Game Design Engineering (GDE)
- Bachelor of Science in Digital Arts Engineering (DAE)
- Bachelor of Science in Digital Audio Technology (DAT)
- Bachelor of Science in Software Engineering (SWE)
- Master of Arts in Entrepreneurship & Innovation (MA ENT)

FACILITY

Description

Cogswell College is conveniently housed in one large 65,000 square foot, single story building, supporting our culture of collaboration and the fusion of arts and engineering. We also have ample free parking and if you do not drive, we are within two blocks of the VTA light rail and several bus lines.

All classes (with the exception of online classes) are held in this building. Our cutting edge facilities make it possible to create games, render and animate short films, develop complex computer software, track, edit, mix and master soundtracks, and more - all while collaborating with peers and faculty without ever having to leave the building.

Facility Hours:

- Monday - Friday 8:00 AM – 5:00 PM PST
- Saturday 9:00 AM –1:00 PM PST

COLLEGE ADMINISTRATION

- Dr. Deborah Snyder, President & Chief Academic Officer
- Abraham Chacko, Vice President of Admissions and Marketing
- Jerome Solomon, Dean of the College
- Dr. Andrey Fedin, Vice President of Information Technology
- Dr. Zachi Baharav, Director of Engineering and Masters in Entrepreneurship & Innovation Programs
- Josie Alexander, Dean of Students
- David Noriega, Registrar

- Heloise Mata, Director of Financial Aid
- Beth Violette, Director of Regulatory and Administrative Affairs
- Kathyrn Riggs, Librarian
- Milla Zlatanov, Director of Institutional Research and Effectiveness
- Nikki Love, Director of Career Services
- Rejino Castaneda, Vice President of Finance and Administration

BOARD OF TRUSTEES

- Charles Cook – (Chairman)
- Brad Palmer
- Charlie MacCormick
- Fardad Fateri
- Gareth Chang
- Harold Levy
- Pablos Holman
- Peter Diamandis
- Richard Chuang

ACADEMIC CALENDAR

2013 Academic Calendar – On-Campus Classes

Spring Semester 2013 (1/7/2013 – 5/4/2013)

October 1, 2012_Monday Spring 2013 Registration begins
December 7, 2012_Friday Spring 2013 Registration deadline
December 10, 2012_Monday Spring 2013 Online registration closes. Late registration fee starts
January 1, 2013_Tuesday 1st day to submit FAFSA
January 3, 2013_Thursday Orientation/Registration for new students
January 7, 2013_Monday Classes begin
January 11, 2013_Friday Last day to switch (DROP/ADD) classes
January 18, 2013_Friday Last Day to DROP classes
January 21, 2013_Monday Martin Luther King Day (Holiday) College closed
February 8, 2013_ Friday Spring 2013 Graduation Applications due
February 18, 2013_Monday President's Day (Holiday) College closed
March 4, 2013_Monday Summer 2013 and Fall 2013 Registration begins
March 04-09, 2013_Mon-Sat Spring Break 2013 (9th week)
March 15, 2013_Friday Last day to WITHDRAW from class (end of 10th week)
March TBA, 2013_Saturday Founders Day (Homecoming)
May 3, 2013_Friday Tuition Due for Summer 2013
May 3, 2013_Friday Summer 2013 Registration deadline
May 4, 2013_Saturday Last day of classes
May 6, 2013_Monday Summer 2013 Online registration closes. Late registration & tuition fee starts.
May 11, 2013_Saturday Commencement Ceremony

Summer Semester 2013 (5/20/13 – 8/10/2013)

March 1, 2013_Friday Summer 2013 and Fall 2013 Registration begins
May 3, 2013_Friday Summer 2013 Registration deadline
May 6, 2013_Monday Summer 2013 Online registration closes. Late registration fee starts
May 16, 2013_Thursday Orientation/Registration for new students
May 20, 2013_Monday Classes begin
May 24, 2013_Friday Last Day to ADD/DROP classes
May 27, 2013_Monday Memorial Day (Holiday) College closed
July 4, 2013_Thursday Independence Day (Holiday) College Closed
July 12, 2013_Friday Last day to WITHDRAW from classes (end of 8th week)
July 19, 2013_Friday Fall 2013 Registration deadline
July 22, 2013_Monday Fall 2013 Online registration closes. Late registration fee starts.
August 9, 2013_Friday Tuition Due for Fall 2013
August 10, 2013_Saturday Last day of classes

Fall Semester 2013 (8/26/2013 – 12/14/2013)

March 1, 2013 – Friday Fall 2013 Registration begins
August 22, 2013 – Thursday Orientation for New Students
August 26, 2013 – Monday First Day of Classes
August 30, 2013 – Friday Last Day to Add
September 2, 2013 – Monday Labor Day (Holiday) – College Closed
September 6, 2013 – Friday Last Day to Drop

November 1, 2013 – Friday Last day to WITHDRAW from class (end of 10th week)
November 28-29, 2013 – Thur-Fri Thanksgiving Day (Holiday) – College Closed
December 14, 2013 – Saturday Last Day of Classes

2013 Academic Calendar – On-Line Classes

2013 Spring Eight Weeks Session Block A (1/7/13 – 3/2/13)

October 1, 2012_Monday 2013 Spring First and Second 8 weeks session Registration begins
December 13, 2012_Thursday 2013 Spring First 8 weeks session Registration deadline
December 13, 2012_Thursday Tuition Due for 2013 Spring First 8 weeks session
January 3, 2013_Thursday Orientation/Registration for new students
January 7, 2013_Monday Classes begin
January 11, 2013_Friday Last Day to DROP/ADD classes
January 21, 2013_Monday Martin Luther King Day (Holiday)
February 8, 2013_Friday Last day to WITHDRAW from classes (end of 5th week)
February 18, 2013_Monday President's Day (Holiday)
March 2, 2013_Saturday Last day of classes

2013 Spring Eight Weeks Session Block B (3/11/13 – 5/4/13)

October 1, 2012_Monday 2013 Spring Second 8 weeks session Registration begins
March 1, 2013_Friday 2013 Spring Second 8 weeks session Registration deadline
March 1, 2013_Friday Tuition Due for 2013 Spring Second 8 weeks session
March 7, 2013_Thursday Orientation/Registration for new students
March 11, 2013_Monday Classes begin
March 15, 2013_Friday Last Day to DROP/ADD classes
April 12, 2013_Friday Last day to WITHDRAW from classes (end of 5th week)
May 4, 2013_Saturday Last day of classes

2013 Summer Eight Weeks Session (6/17/13 – 8/10/13)

March 1, 2013_Friday 2013 Summer 8 weeks session Registration begins
June 7, 2013_Friday 2013 Summer 8 weeks session Registration deadline
June 7, 2013_Friday Tuition Due for 2013 Summer 8 weeks sessions
June 13, 2013_Thursday Orientation/Registration for new students
June 17, 2013_Monday Classes begin
June 21, 2013_Friday Last Day to DROP/ADD classes
July 4, 2013_Thursday Independence Day (Holiday)
July 19, 2013_Friday Last day to WITHDRAW from classes (end of 5th week)
August 10_Saturday Last day of classes

2014 Academic Calendar – Semester Classes

Spring Semester 2014 (1/13/2014 – 5/10/2014) *16 weeks*

October 1, 2013_Wednesday Spring 2014 Registration begins
November 27, 2013_Friday Spring 2014 Registration deadline.
December 2, 2013_Monday Spring 2014 Late registration and tuition fees start.
December 20, 2013_Friday Spring 2014 Tuition Deadline
January 1, 2014_Wednesday 1st day to submit the 2014-15 FAFSA

January 9, 2014_Thursday Orientation/Registration for new students
January 13, 2014_Monday Classes begin
January 17, 2014_Friday Last day to ADD classes
January 20, 2014_Monday Martin Luther King Day (Holiday) College closed January 24, 2014_Friday Last Day to DROP classes
February 7, 2014_ Friday Spring 2014 Graduation Applications due
February 17, 2014_Monday President's Day (Holiday) College closed
March 3, 2014_Monday Summer 2014 and Fall 2014 Registration begins
March 10-14, 2014_Mon-Sat Spring Break 2014 (9th week)
March 28, 2014_Friday Last day to WITHDRAW from class (end of 10th week)
May 2, 2014_Friday Summer 2014 Registration and tuition deadline
May 5, 2014_Monday Summer 2014 Online registration closes. Late registration and tuition fees start.
May 10, 2014_Saturday Last day of classes
May 17, 2014_Saturday Commencement Ceremony

Summer Semester 2014 (6/9/14 – 8/30/2014) NEW 12 weeks

March 3, 2014_Monday Summer 2014 Registration begins
May 2, 2014_Friday Summer 2014 Registration and tuition deadline
May 5, 2014_Monday Summer 2014 Late registration and tuition fees start.
May 22, 2014_Thursday Orientation/Registration for new students
May 26, 2014_Monday Memorial Day (Holiday) College closed
June 9, 2014_Tuesday Classes begin
June 13, 2014_Friday Last day to ADD/DROP classes
July 4, 2014_Friday Independence Day (Holiday) College Closed
August 1, 2014_Friday Last day to WITHDRAW from classes (end of 8th week)
August 8, 2014_Friday Fall 2014 Registration and tuition deadline
August 11, 2014_Monday Fall 2014 Late registration and tuition fees start.
August 30, 2014_Saturday Last day of classes

Fall Semester 2014 (9/8/14 – 12/20/14) *15 weeks*

March 3, 2014_ Monday Fall 2014 Registration Begins
August 8, 2014_Friday Fall 2014 Registration and tuition deadline
August 11, 2014_Monday Fall 2014 Late registration and tuition fees start.
September 1, 2014_ Monday Labor Day (Holiday) College closed September 4, 2014_Thursday Orientation/Registration for new students
September 8, 2014_Monday Classes begin
September 12, 2014_Friday Last day to ADD classes
September 19, 2014_ Friday Last day to DROP classes
September 29, 2014_ Monday Fall 2014 Graduation Applications due
October 1, 2014_Wednesday Spring 2015 Registration begins
November 14, 2014_Friday Last day to WITHDRAW from classes (end of 10th week)
November 26-28, 2014_Thu-Fri Thanksgiving (Holiday) College closed
November 28, 2014_Friday Spring 2015 Registration and Tuition deadline.
December 1, 2014_Monday Spring 2015 Late registration and tuition fees start.
December 20, 2014_Saturday Last day of classes
December 24, 2014- January 1,2015 Winter Break College closed

2015 Academic Calendar – Semester Classes

Spring Semester 2015 (2/2/2015 – 5/23/2015) *15 weeks*

October 1, 2014_Wednesday Spring 2015 Registration begins
November 28, 2014_Friday Spring 2015 Registration and Tuition deadline.

December 1, 2014_Monday Spring 2015 Late registration and tuition fees start. January 1, 2015_Thursday 1st day to submit 2015-16 FAFSA
January 15, 2015_Thursday Orientation/Registration for new students
January 19, 2015_Monday Martin Luther King Day (Holiday) College closed
January 20, 2015_Tuesday Classes begin
January 23, 2015_Friday Last day to ADD classes
January 30, 2015_Friday Last day to DROP classes
February 16, 2015_Monday President's Day (Holiday) College closed
February 20, 2015_ Friday Spring 2015 Graduation Applications due
March 2, 2015_Monday Summer 2015 and Fall 2015 Registration begins
March 16-21, 2015_Mon-Sat Spring Break 2015
April 3, 2015_Friday Last day to WITHDRAW from class (end of 10th week)
May 1, 2015_Friday Summer 2015 Registration and tuition deadline
May 4, 2015_Monday Summer 2015 Late registration and tuition fees start.
May 9, 2015_Saturday Last day of classes
May 16, 2015_Saturday Commencement Ceremony
May 25, 2015_Monday Memorial Day (Holiday), College Closed

Summer Semester 2015 (6/8/2015 – 8/29/2015) *12 weeks*

March 2, 2015 - Summer 2015 Registration begins
May 1, 2015 - Summer 2015 Registration and tuition deadline
May 4, 2015 - Summer 2015 Late registration and tuition fees start.
May 25, 2015 - Memorial Day (Holiday) College closed
May 28, 2015 - New Student Orientation/Registration
June 1, 2015 - First day of classes/Start of HS Summer Program
June 5, 2015 - Last day to ADD/DROP classes
July 3-4, 2015 - Independence Day (Holiday) - College Closed
July 24, 2015 - Last day to WITHDRAW from classes (end of 8th week)
August 7, 2015 - Fall 2015 Registration and tuition deadline
August 10, 2015 - Fall 2015 Late registration and tuition fees start
August 22, 2015 - Last day of classes/End of HS Summer Program

Fall Semester 2015 (9/8/15 – 12/19/15) *15 weeks*

March 2, 2015_ Monday Fall 2015 Registration Begins
August 7, 2015_Friday Fall 2015 Registration and tuition deadline
August 10, 2015_Monday Fall 2015 Late registration and tuition fees start.
September 3, 2015_Thursday Orientation/Registration for new students
September 7, 2015_ Monday Labor Day (Holiday) College Closed
September 8, 2015_Tuesday Classes begin
September 11, 2015_Friday Last day to ADD classes
September 18, 2015_ Friday Last day to DROP classes
September 30, 2015_ Monday Fall 2015 Graduation Applications due
October 1, 2015_Thursday Spring 2015 Registration begins
November 13, 2015_Friday Last day to WITHDRAW from classes (end of 10th week)
November 26-27, 2015_Thu-Fri Thanksgiving (Holiday) College closed
December 4, 2015_Friday Spring 2016 Registration and Tuition deadline.
December 7, 2015_Monday Spring 2016 Late registration and tuition fees start.
December 19, 2015_Saturday Last day of classes
December 24, 2015- January 1, 2016 Winter Break College closed

2013-2014 Academic Calendar –8 Weeks Session Classes

2013 Fall Eight Weeks Session Block A (8/26/13 – 10/19/13)

March 4, 2013_Monday 2013 Fall 8 weeks sessions Block A and B registration begins
August 9, 2013_Friday 2013 Fall 8 weeks sessions Block A and B registration and tuition deadline
August 12, 2013_Monday 2013 Fall 8 weeks sessions Block A and B online registration closes.
Late registration and tuition fees start.
August 23, 2013_Thursday Orientation/Registration for new students
August 26, 2013_Monday Classes begin
August 30, 2013_Friday Last Day to DROP/ADD classes
September 2, 2013_ Monday Labor Day (Holiday)
September 27, 2013_Friday Last day to WITHDRAW from classes (end of 5th week) **October 19, 2013_Saturday Last day of classes**

2013 Fall Eight Weeks Session Block B (10/21/13 – 12/14/13)

March 4, 2013_Monday 2013 Fall 8 weeks sessions Block A and B registration begins
August 9, 2013_Friday 2013 Fall 8 weeks sessions Block A and B registration and tuition deadline
August 12, 2013_Monday 2013 Fall 8 weeks sessions Block A and B online registration closes.
Late registration and tuition fees start.
October 17, 2013_Thursday Orientation/Registration for new students
October 21, 2013_Monday Classes begin
October 25, 2013_Friday Last Day to DROP/ADD classes
November 20, 2013_Wed Last day to WITHDRAW from classes (end of 5th week)
November 21-22, 2013_Thu-Fri Thanksgiving (Holiday)
December 14, 2013_Saturday Last day of classes

2014 Spring Eight Weeks Session Block A (1/13/14 – 3/8/14)

October 1, 2013_Tuesday 2014 Spring 8 weeks sessions Block A and B registration begins
December 13, 2013_Friday 2014 Spring 8 weeks sessions Block A and B registration and tuition deadline
December 15, 2013_Monday 2014 Spring 8 weeks sessions Block A and B online registration closes.
Late registration and tuition fees start.
January 9, 2014_Thursday Orientation/Registration for new students
January 13, 2014_Monday Classes begin
January 17, 2014_Friday Last Day to DROP/ADD classes
January 20, 2014_Monday Martin Luther King Day (Holiday)
February 14, 2014_Friday Last day to WITHDRAW from classes (end of 5th week)
February 17, 2014_Monday President's Day (Holiday)
March 8, 2014_Saturday Last day of classes
March 10-14, 2013_Mon-Sat Spring Break 2013
2014 Spring Eight Weeks Session Block B (3/17/14 – 5/10/14)
October 1, 2013_Tuesday 2014 Spring 8 weeks sessions Block A and B registration begins
December 13, 2013_Friday 2014 Spring 8 weeks sessions Block A and B registration and tuition deadline
December 15, 2013_Monday 2014 Spring 8 weeks sessions Block A and B online registration closes.
Late registration and tuition fees start.
March 13, 2014_Thursday Orientation/Registration for new students
March 17, 2014_Monday Classes begin March 21, 2014_Friday Last Day to DROP/ADD classes
April 18, 2014_Friday Last day to WITHDRAW from classes (end of 5th week)
May 10, 2014_Saturday Last day of classes

2014 Summer Eight Weeks Session (6/23/14 – 8/16/14)

March 3, 2014_Friday 2014 Summer 8 weeks session Registration begins
June 6, 2014_Friday 2014 Summer 8 weeks sessions Block A and B registration and tuition deadline
June 9, 2014_Monday 2014 Summer 8 weeks sessions Block A and B online registration closes.
Late registration and tuition fees start.
June 19, 2014_Thursday Orientation/Registration for new students
June 23, 2014_Monday Classes begin
June 27, 2014_Friday Last Day to DROP/ADD classes
July 3-4, 2014_Thu-Fri Independence Day (Holiday)
July 25, 2014_Friday Last day to WITHDRAW from classes (end of 5th week)
August 16, 2014_Saturday Last day of classes

Admissions

Application Procedures

Applicants for admission must submit the following to the Admissions Office:

1. Interview with a College admissions advisor,
2. A completed application form,
3. An essay from the applicant which describes his/her reason for applying to Cogswell College,
4. A completed recommendation form or recommendation letter
5. An official high school transcript; or an official report of scores earned on the General Educational Development (GED) test, or proof of completion in a home schooling program.
6. A portfolio of original work for the Digital Arts and Animation (DAA) program, the Digital Audio Technology (DAT) program, Game Design & Art (GDA) program and the Digital Media Management (DMM) program, where applicable.

Rolling Admissions

Cogswell College continuously accepts and reviews completed applications, rendering admission decisions to applicants throughout the calendar year for the following term starts. The Admissions Department will advise students on appropriate deadlines according to date of term start and course availability.

Notification of Admission

All applicants will receive an acknowledgement of their admission status approximately two weeks after their file is complete and processed. Notification will include information regarding registration and academic advising.

Undergraduate Student Admissions Requirements

In general, admission decisions are based on evaluation of the applicant's portfolio (where applicable), academic record, application, essay, and recommendations. The following are the general admissions requirements for all students:

- Proof of high school graduation, successful completion of General Education Development (GED), or home schooling program in form of official transcripts/document. Transcripts must be received no later than 30 calendar days from the start of the semester. Transcripts should be sent to the Registrar's Office:

  Attention: Registrar's Office
  Cogswell Polytechnical College
  1175 Bordeaux Drive
  Sunnyvale, CA 94089
  registrarsoffice@cogswell.edu

- A portfolio of artwork for the DAA, GDA, DAT and DMM programs. See further discussion below.

Highest consideration will be given to students with GPA of 2.7 or higher

Applicants interested in learning more about Cogswell College are invited to visit the campus. Information regarding degree programs is available from the Admissions office.

Cogswell College
1175 Bordeaux Drive, Sunnyvale, California 94089
408-541-0100, Toll Free: (800-264-7955)
www.cogswell.edu

Undergraduate Portfolio Entrance Requirement

Digital Arts and Animation (DAA) Portfolio Requirements:

A portfolio of the student's best work must accompany an application to the Digital Arts and Animation program. Your portfolio must contain original artworks or a CD/DVD containing at least seven (7) submissions of which at least four (4) must be original drawings and/or paintings. In addition, you may include the following:

1. Photos of artwork or sculpture
2. Printouts of computer-created images
3. Images or animations delivered in an electronic format

Game Design Art (GDA) Program Portfolio Requirements:

A portfolio of the student's best work must accompany an application to the Game Design Art program. Your portfolio must contain original artworks or a CD/DVD containing at least seven (7) original drawings and/or paintings. In addition, you may include the following:

1. Photos of artwork or sculpture
2. Printouts of computer-created images
3. Video game levels, Images, or animations delivered in an electronic format

Digital Audio Technology (DAT) Program Portfolio Requirement:

A portfolio of the student's best work must accompany an application to the Digital Audio Technology program. One (1) or more of the following may be submitted:

1. Original MIDI sequences in an electronic format
2. CD/DVD of instrumental or vocal performance
3. A CD/DVD of original studio engineering work
4. Evidence of high school band, orchestra or chorus experience
5. Written summary of private music lessons (instrument, years, and teacher).

Digital Media Management (DMM) Program Requirement:

A portfolio for Digital Media Management must include a past, present, and/or future business model of the student's interest. Value proposition, Key Activities, Cost Structure and Revenue Structure should be addressed to help understand a student's goals for the business they are describing.

Graduate Admissions Requirements

Master of Arts in Entrepreneurship & Innovation (ENT)

Cogswell requires all applicants to meet the following requirements to be considered for graduate admission:

- Proof of a four-year Bachelor's degree in the form official transcripts. If the degree was earned outside the United States, transcripts have to be translated, if applicable, and assessed by a member of the National Association of Credential Evaluation Services (NACES) or Association of International Credential Evaluators (AICE).
- A recommended 2.7 grade point average in your undergraduate degree.
- Essay explaining your interest in the entrepreneurship program and your career goals
- One (1) letter of recommendation.

Desired qualifications:

- Having started or currently running your own business, or experience in a startup/small business is a plus.
- Comfort with everyday mathematics; exposure to economics and statistics a plus.
- Familiarity with Microsoft Office Suite software or similar software.
- Results from standardized graduate admissions tests, such as the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT).

Enrollment Statuses

Cogswell College admits students who have potential for a career in one of the digital arts or engineering disciplines. While our focus is on degree-seeking students, we admit other students under certain circumstances.

The classifications of different types of students are as follows:

- **Matriculated Degree student**: A degree candidate who has applied, been properly admitted, registered and is actively pursuing a degree. Admissions requirements for degree students are listed below. Matriculated degree students are further classified as:
  - **First Time Freshman** – a degree-seeking student who has no prior post-secondary experience attending any institution for the first time at the undergraduate level. Students who entered with advanced standing (college credits earned before graduation from high school) are also included.
  - **Freshman Student** – a degree seeking student who transfers less than 12 credits from another institution
  - **Transfer Student** – a degree seeking student who transfers 12 or more credits from another institution
  - **Returning Student** – a degree-seeking student who re-applies to continue his/her education at the college after not attending for 1 or more years.
  - **International Student** – a) student who does not hold a U.S. citizenship or permanent residency in the U.S. or b) a student who is enrolled for credit at an accredited higher education institution in the U.S. on a temporary visa, and who is not an immigrant (permanent resident with an I-551 or form I-151), or an undocumented immigrant or refugee. (UNESCO)

- **Non-matriculated student**: A student, who is not seeking a degree at the time of admission, is not interested in receiving financial aid and who wishes to waive placement testing and academic advisement. Non-matriculated students do not follow the admission requirement of matriculated students. The Non-matriculated student status is designed to allow any interested individual to attend college credit courses without declaring a major or seeking a degree. Students who register under this status for a given semester may not matriculate until the following semester. A non-matriculated student that wishes to become a matriculated student must follow the admission requirement for the matriculated students. This status is most suited to students who wish to enroll in courses for personal enrichment, learning/upgrading job skills or fulfilling degree requirements for another institution. Matriculated students take precedence over non-matriculated students for classes with limited class size.
    - **Visitor** – a non-matriculated domestic student enrolled in classes. These students will earn credits for coursework taken at Cogswell.

Both matriculated and non-matriculated students will be classified as one of the following:

- **Full-time student**: A student who is enrolled for 12 or more credits.
- **Part-time student**: A student who is enrolled for fewer than 12 credits.
- **Auditor**: A student who is enrolled in a class, but who is not taking the course for credit. This option must be declared at the time of registration. Degree students, as well as non-matriculated students, may audit courses. Students taking the course for credit will take precedence when class seats are limited. Please see the Financial Information section for the cost of audit tuition and the Academic Policies section for more information about audit policies. Auditors receive a lower seating priority than students who register for credit.

Requirements for Visitor

Visitors may register for classes by submitting:

1. A completed Visitor Registration Form
2. Pay the appropriate tuition prior to class start.

A Visitor may change to degree-seeking status upon the completion of application requirements as listed in this catalog.

Requirements for Auditing students

Auditors are required to interview with a faculty member for approval to register for classes. The student will need to complete registration in-person at the Registrar's Office. Students registered for the course may not change their status to auditing after they have registered.

Requirements for Returning Students

A returning student is one who has not attended Cogswell College for one calendar year or more. When re-entering Cogswell, the returning student must reapply according to the application procedures listed in this catalog. At the time of his/her return, a returning student will follow any current academic, admissions, curricula, academic procedure, and degree plan including those listed in the College Catalog.

Enrollment and Registration

Prior to registration, all enrolled students will receive information on current class scheduling. See the section on registration for more information on the registration process. Cogswell College reserves the right to revoke acceptance or continued enrollment if:

1. Any application materials are false or misrepresented.
2. The student imposes any risk to the health, safety or welfare of others.
3. A student disrupts the orderly process of the College, or a student violates any Cogswell policy.

Requirements for International Applicants

Cogswell College welcomes students from other countries. International students must complete their Cogswell College application in time to process required documents with the United States Citizenship and Immigration Services (USCIS). International students may enroll as full-time students only. Applicants are to submit the following applications materials to the Admissions Office:

1. A completed application
2. An official transcript from each college attended. Applicants are requested to send certified English translations of transcripts certified by the National Association of Credential Evaluation Services member. (www.naces.org) or Association of International Credentials Evaluators
3. TOEFL test results; the minimum accepted score is 525 (paper-based), 197 (computer-based), 69 (internet-based)

   Unless the native language of the nonimmigrant student is English, and the College can confirm the native language, then the student is not required to take the TOEFL test.

   There is no limited amount of times a student can take the test. TOEFL test scores are valid for two (2) years after the test date. The official scores become part of the permanent student record once the student has enrolled with the College.
4. An Affidavit of Financial Support.

In addition to the above, international students must fulfill all admissions requirements. Consult the Admissions department for additional information.

Transfer of Credit Policy

In accordance with WASC, Senior College and University Commission's Transfer of Credit Policy Criteria, Cogswell assumes control of award of credits based on the following:

- Comparability and Applicability
- Balance in the use of Accreditation Status in Transfer Decisions
- Consistency
- Accountability for Effective Public Communication
- Commitment to Address Innovation
- Applicability of Credit for Degree Purposes
- Evaluation of Credit from Foreign Institutions

Residency Requirements

At a minimum, a student enrolled in an undergraduate program must complete at least 25% of the program of study in residence with Cogswell College (example: Program of study with 120 credits must complete a minimum of 30 credits in residence).

At a minimum, a student enrolled in a graduate program must complete at least 75% of the program of study in residence with Cogswell College (example: Program of study with 30 credits must complete 22 credits in residence).

Evaluation Of Transfer Credit

Cogswell College has developed and implemented a transfer credit policy and implementation practices for consistent application to all students. Full and accurate disclosure of policies and practices are important to ensure to all Cogswell College transfer applicants that the transfer process is built on a strong commitment to fairness and effectiveness.

Award of transfer of credit toward program completion is based upon; 1) comparability of transfer credit to requirements of the specific course in a selected program of study, and 2) compliance with stated criteria for this credit at Cogswell College.

Criteria for consideration of transfer of credit are contingent on the following conditions:

1. For undergraduate students, coursework completed must have a minimum grade of "C". For graduate students, coursework completed must have a minimum grade of "B". Courses taken for credit with a "P" grade may be transferred if a clearly defined institutional policy identifies the "P" grade as equivalent to a "C" or better for undergraduate work, or a grade of "B" or better for graduate study.
2. Cogswell does not accept work experience, physical education, English as a second language (ESL), or developmental/remedial courses.
3. Cogswell will consider foreign postsecondary official transcripts if evaluated and translated by a member of National Association of Credential Evaluation Services (NACES) or Association for International Credentials Evaluators, INC. (AICE).
4. Courses completed beyond ten (10) years are evaluated on a case-by-case basis.
5. Coursework must have been completed at the same level (upper or lower) as course for which is deemed comparable.
6. Coursework must be awarded for credit value comparable to, or greater than, that required for Cogswell course (i.e., semester or quarter converted basis must equal or exceed that required by Cogswell).
    a. *Conversion of quarter credit to semester credits is as follows:*
    3 semester credits equate to 4.5 quarter credits.
    4.5 quarter credits are equal to 3 semester credits.
7. Official Transcripts must be sent directly to the Registrar's Office. Transcripts marked "Unofficial" or "Issued to Student" will not be considered for evaluation for transfer credit.

Credits Earned At the U.S. Armed Forces Institute

Credit will be awarded, at the sole discretion of the College, for U.S. Armed Forces Institute (USAFI) courses if in compliance with the Guide to the Evaluation of Educational Experiences in the Armed Forces, published by the American Council on Education (ACE).

College Level Examination Program (CLEP)

Students may receive college credit for certain courses through exams administered by the College Level Examination Program (CLEP) and the Defense Activity for Non-Traditional Education System (DANTES). Both programs are governed by the College Entrance Examination Board. Minimum passing scores are detailed in the tables below.

CLEP Subject	Pass	Cogswell Equivalent	Credits
American Government	49+	SSC200 U.S. Government	3
American Literature	49+	ENG210 Cultural Diversity in Literature	3
Analyzing and Interpreting Literature	49+	ENG210 Cultural Diversity in Literature, or ENG227 Scriptwriting, or ENG228 Creative Writing	3
Biology	49+	BIOL130 Physical Science SCI100 Basic Concepts of Physics, or SCI110 The Science of Motion: Humans, Animals, Objectives, or SCI130 Basic Concepts of Anatomy and Physiology	3
Calculus	49+	MATH143 Calculus 1	4
Chemistry	49+	CHEM112 Hazardous Materials	3
College Algebra	49+	MATH112 College Algebra, MATH115 Basic Topics in Mathematics	3
College Composition	49+	ENG227 Scriptwriting , or ENG228 Creative Writing	3
College Mathematics	49+	MATH112 College Algebra	3
English Composition Modular	49+	ENG100 English Composition and Critical Thinking	3
English Literature	49+	ENG210 Cultural Diversity in Literature	3
Financial Accounting	49+	ACC300 Accounting/Budgeting, DMM250 Financial Models and Management 1	3
History of the US I	49+	SSC200 U.S. Government	3
History of the US II	49+	HUM200 History of the Modern World	3
Humanities	49+	ENG210 Cultural Diversity in Literature	3
Introductory to Business Law	49+	DMM110 Digital Media Business Models 1	3
Natural Sciences	49+	SCI100 Basic Concepts of Physics, or SCI110 The Science of Motion: Humans, Animals, Objectives, or SCI130 Basic Concepts of Anatomy and Physiology	3
Pre-Calculus	49+	MATH116 Pre-Calculus	4
Principles of Management	49+	DMM110 Digital Media Business Models 1	3
Principles of Marketing	49+	DMM140 Consumer and Market Behavior	3
Principles of Microeconomics	49+	SSC240 Principles of Microeconomics	3
Social Sciences and History	49+	SSC240 Principles of Microeconomics	3
Western Civilization I: Ancient Near East to 1648	49+	HUM122 World Music	3
Western Civilization II: 1648 to	49+	HUM125 Music in Western Culture	3

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DANTES DSST Subject	Pass	Cogswell Equivalent	Credits
Art of Western World	48+	HUM120 The Nature and History of Western Art, or HUM130 Modern Art History	3
Business Ethics and Society	400+	DMM365 Ethics, Development and Responsibility Management	3
Business Law II	44+	DMM125 Cover Your Assets	3
Ethics in America	46+/400+	DMM365 Ethics, Development and Responsibility Management	3
Fundamentals of College Algebra	47+/400+	MATH112 College Algebra, MATH115 Basic Topics in Mathematics	3
Introduction to Business	46+/400+	DMM110 Digital Media Business Models I	3
Principles of Finance	46+/400+	DMM250 Financial Models and Management 1	3
Principles of Physical Science I	47+	SCI100 Basic Concepts of Physics, or SCI110 The Science of Motion: Humans, Animals, Objectives, or SCI130 Basic Concepts of Anatomy and Physiology	3
Technical Writing	49+	ENG227 Scriptwriting, or ENG228 Creative Writing	3
West Europe Since 1945	49+	HUM200 History of Modern World	3

Advanced Placement Program

Students may receive college credit for certain courses based on scores of the Advanced Placement Test (AP). Credit in appropriate courses will be given for examinations passed with a score of 3 or higher. These tests are administered by national testing organizations and test results must be sent directly to the College by the organization in order to be valid. The following Advanced Placement Courses transfer directly into Cogswell courses:

AP Test	Cogswell Class
AP Music Theory	DAT102 Music Theory 1
AP Studio Art 2D Design Portfolio	DAA100 2D Design 1
AP Studio Art Drawing Portfolio	DAA110 Sketching
AP Studio Art 3D Design Portfolio	DAA230 Introduction to Sculpture
AP Computer Science A	SWE 212 Java Programming
AP Microeconomics	DMM150 Principles of Microeconomics
AP Art History	HUM120 Nature and History of Western Art
AP English Language and Composition	ENG100 Composition and Critical Thinking
AP United States Government and Politics	SSC200 U.S. Government

AP European History, or **AP United States History, or** **AP World History**	HUM200 History of the Modern World
AP Comparative Government and Politics	HUM200 U.S. Government
AP Calculus AB	MATH143 Calculus 1
AP Calculus BC	MATH144 Calculus 2
AP Physics B	SCI145 College Physics 1
AP Physics 1, or **AP Physics 2**	SCI100 Basic Concepts in Physics
AP Physics 1 or B	SCI145 College Physics 1
AP Physics 3 or C	SCI245 College Physic 2

Credit by Challenge Examination

Under certain circumstances as determined by the appropriate Program Director/Chair and as approved by the Dean of the College, students may demonstrate competency and receive course credit by successfully completing associated examinations and/or assignments rather than attending class and meeting the course learning outcomes.

There is a $75.00 non-refundable fee for taking a Challenge examination. Examination may only be taken one (1) time. Challenge exams will only be given for lower division courses, excluding developmental/remedial courses. A course previously failed, withdrawn, audited, or one in which a student has received an Incomplete grade, may not be challenged.

See course listings for challenge examination availability.

Program	Course
Digital Art and Animation	DAA100 2D Design 1
Digital Art and Animation	DAA105 Color Theory
Digital Art and Animation	DAA106 Digital Imaging Concepts
Digital Art and Animation	DAA108 Introduction to Photography
Digital Art and Animation	DAA109 Web Design
Digital Art and Animation	DAA110 Sketching
Digital Art and Animation	DAA115 Figure Drawing 1
General Education	ENG100 Composition and Critical Thinking
General Education	ENG227 Scriptwriting
General Education	ENG228 Creative Writing
General Education	HUM120 The Nature and History of Western Art
General Education	HUM125 Music in Western Culture
General Education	HUM130 Modern Art History
General Education	HUM200 History of the Modern World
General Education	HUM227 Film History

General Education	MATH115 Basic Topics in Mathematics
General Education	MATH116 Pre-Calculus
General Education	MATH143 Calculus 1
General Education	MATH144 Calculus 2
General Education	MATH245 Calculus 3
General Education	SSC200 U.S. Government
Engineering	SWE100 Introduction to Scripting: Python
Engineering	SWE110 C Programming
Engineering	SWE212 Java Programming

Students that desire to challenge must see the Registrar's Office. Please note that challenge examinations are not counted when determining full or part time status for the term.

Transfer of Credit After Matriculation

A student who is requesting to attend another academic institution may do so by completing a Transfer of Credit after Matriculation Permission Form available from the Registrar's Office. Students should not register at another academic institution until receiving confirmation Cogswell College has approved the proposed transfer credit. Students may only transfer a maximum of 20 semester credits after matriculation.

Approval requires the action of the Dean of the College and Registrar.

Students may need to provide the following information:

- Name of Institution
- Course Numbering System
- Credit Hour Policy
- Course Description
- Cogswell Equivalency
- Proof of Registration

Students that are attending another academic institution should consult with the Registrar; it is advised that students register for at least six credits with Cogswell Polytechnical College to be an active student. Students that are not registered for one (1) semester may be withdrawn, excluding summer semester.

No transfer credits will be accepted during the last 12 semester units of course work.

Transfer of Cogswell Credit to Other Institutions

The transferability to other colleges or universities of credits earned at Cogswell is completely determined by the receiving institution. Determination of award of academic credit or recognition or academic degree is at the discretion of the institution receiving the Cogswell credits. Cogswell College cannot guarantee transfer credits to other institutions.

Articulation Agreements

Cogswell College establishes articulation agreements with other academic institutions. A list of those institutions can be found on the college website.

REGISTRATION AND RECORDS

Registration Process

The College offers online registration. See the Academic Calendar for specific dates and deadlines. Students are notified via email of the release of the class schedule and important deadlines. Students select the classes they need by using their Degree Audit (available through the Online Student Portal) and/or consulting with their Academic Advisor.

All active students have access to the Online Student Portal where they can find academic, financial and curricular information, along with a degree audit and course schedules.

Step 1: After reviewing the course schedule and their degree audit, students register online. If online registration is not available for a course, students should meet with their Academic Advisor. It will be necessary to submit an add/drop form to the Registrar. Students are unofficially registered at this point.

Step 2: Students pay the full tuition by the deadline published in the academic calendar. Tuition can be paid online or in the business office. Registration becomes official at this point.

Step 3: Students can make online changes to their class schedule only before they are officially registered. Schedule changes after official registration must be submitted to the Registrar on an Add/Drop form with their advisor's approval signature.

Continuing students who register during late registration are subject to a late registration fee.

Prerequisites

A student may not enroll in a course for which all prerequisites have not been satisfied. A student may not register for a class and its prerequisites in the same semester. For information on prerequisites and co-requisites, please see the course descriptions that follow the curriculum for each program.

Add/Drop Period Procedures

Students wishing to add or drop classes after the normal registration period are responsible for adding and dropping classes within the specified time frame by completing an Add/Drop form from the Registrar's Office, and submit the completed form to the Registrar's Office within the specified time frame. Adds and drops are not official unless the forms are submitted to and received by the Registrar's Office. Lack of attendance in a class will not constitute a drop and will results in an "F" grade and/or charges.

Adding Classes: Classes can only be added during the first week of the semester.

Dropping Classes: Classes may be dropped during the first two (2) weeks of the semester. During the summer semester, the drop period is by the end of the first week.

Transcripts and Other Official Documents

Request for official transcripts must be submitted in writing by student or graduate. Cogswell College will provide up to three (3) official transcripts free of charge; thereafter, a $10 fee will be assessed for each additional transcript. Any request for transcripts or other official documents can be provided by the Registrar's Office.

Document Hold

No official documents including official transcripts or diplomas will be released until all financial obligations are met and library materials, equipment, or other college property is returned.

Student Record Retention

Conforming to Federal Regulation (34 CFR §668.24), Cogswell College retains all required records for a minimum of three (3) years from the end of a student's award year. However, some financial aid documents and all transcripts are kept indefinitely.

Change of Contact Information

It is the student's responsibility to maintain the correct mailing address. A Change of Address form should be submitted to the Registrar's Office immediately after a change occurs.

FINANCIAL INFORMATION

Tuition Information for Registration

Students are not officially registered unless their account balance is current. Tuition may be paid in several ways, including, but not limited to, payment in full according to the tuition schedule and through financial aid. The Financial Aid Office can provide a detailed explanation of payment methods and plans.

Tuition payments may be paid through the on-line student portal via PayPal. Payments may also be made by mail with a certified or cashier's check, with a money order, MasterCard, Visa, American Express or with a personal check. Checks are to be made payable to Cogswell College. All payments should be sent to:

Student Accounts Office
Cogswell College
1175 Bordeaux Drive
Sunnyvale, California 94089

The name of the student, the student's college ID and the purpose for any amount paid must be included with the payment.

Special Tuition Policy for Cogswell Graduates

Cogswell College encourages Cogswell graduates to return as non-degree seeking students by allowing them to take one undergraduate course each semester at one-half of the regular tuition charge.

Cogswell College graduates taking courses under this program are allowed to register during the late registration period provided they obtain the approval of the instructor for the course being taken and the approval of the Dean of the College. Graduates must follow the regular registration process. Class availability is on a space-available basis - degree-seeking students have precedence over graduates.

Withdrawal from School and Impact on Financial Aid

You have the right to withdraw from the institution at any time. In addition, you may be withdrawn by the school at any time if you fail to meet the academic and attendance policies or you do not return from an approved Leave of Absence on the scheduled date. Your official withdrawal date will be the date the school determines you will no longer be attending ("Date of Determination" or "DOD"). The date of determination is the earlier of the date you notify the institution of your intention to withdrawal or the date that you failed to meet the academic or attendance policies of the school. A refund will be calculated through your last date of attendance per the Refund Calculation policy below. See Process of Withdrawing from institution below.

Process for Withdrawing from Institution

Students desiring to withdraw from the institution must contact the Registrar's office to initiate the withdrawal process.

Refund Policy

Students who drop classes (but remain enrolled in other classes), during the designated add/drop period, will be entitled to a 100% refund of applicable tuition charges for the dropped classes. After the last day of the add/drop period, students who remain enrolled but drop classes will not be eligible for a refund for those classes.

Students who withdraw from all classes on or after the start of the semester will be subject to a pro-rata tuition charge. They will owe a percentage of their fees corresponding to the last date of recorded attendance in their class. A prorated refund from the first day of instruction, up to the 60th percent point in the academic period, will be applied to students who withdraw from Cogswell College. For example, the 60th percentile point will be equivalent to a 40% refund of tuition charges

The following is the refund percentage by week:

Fall and Spring Terms		Summer Term	
First and Second Week of Class	100%	First and Second Week of Class	100%
Third Week of Class	81%	Third Week of Class	80%
Fourth Week of Class	75%	Fourth Week of Class	70%
Fifth Week of Class	69%	Fifth Week of Class	60%
Sixth Week of Class	63%	Sixth Week of Class	50%
Seventh Week of Class	56%	Seventh Week of Class	40%
Eighth Week of Class	50%	Beyond Week Seven	0%
Ninth Week of Class	44%		
Tenth Week of Class	40%		
Beyond Week 10	0%		

Return of Title IV

In compliance with Federal regulations, the school will determine how much Federal student financial assistance the student has earned or not earned when a student withdraws from school (refund calculation). Further, once the refund calculation is performed, the institution must determine how much federal aid may be retained and any additional funds owed by the student.

The College will calculate the percentage and amount of awarded Federal student financial assistance that the student has earned if the student withdraws up through the 60 percent point of the term. If the student has completed more than 60 percent of the term, the student earns 100 percent of the Federal student financial assistance. The calculation generally is based upon the percentage of the enrollment period which the student has completed, and is independent of the College's tuition refund policy.

The amount earned will be based on the percentage of the term that was completed in days up to and including the last date of attendance. To calculate the amount earned, the College will determine the percentage by dividing the number of calendar days completed in the term up to and including the last date of attendance by the total number of calendar days in the term.

If the student received more than the amount of Federal student financial assistance earned, the difference will be returned to the Federal student financial assistance programs from which funds were received in the following order: Unsubsidized Direct Loan, Subsidized Direct Loan, PLUS Loan, Pell Grant, SEOG. Funds will

be returned to the aid source within 45 days of the date that the College determines that the student has withdrawn.

If there are remaining unearned Federal financial aid funds to be returned, the student must return any loan funds that remain to be returned in accordance with the terms and conditions of the promissory note. If the remaining amount of funds to be returned includes grant funds, the student must return any amount of the overpayment that is more than half of the grant funds received. The College will notify the student as to the amount owed and how and where it should be returned.

Students who withdraw on or after the start of the semester will be subject to a pro-rata charge. They will owe a percentage of their fees corresponding to the day their classes were dropped. Students who drop units, (but remain enrolled), resulting in a lower fee structure during the designated Add/Drop period, will be entitled to a refund of applicable tuition charges. After the last day of the Add/Drop period, students who remain enrolled but drop classes will not be eligible for a refund for those classes that are dropped.

Payment of refunds

Refunds will be paid within 45 days from the date of determination.

Post-Withdrawal Disbursements

Students who have earned more aid than had been disbursed at the time of withdrawal will be eligible for a Post Withdrawal Disbursement. The Financial Aid Office must notify the student within 30 days of the withdrawal date of the availability of Post-Withdrawal funds. The student will have 15 days to respond to the notice. It is at the discretion of the College to allow a Post-Withdrawal Disbursement for a student who fails to respond to the school within the 15-day period. Once the student accepts the Post-Withdrawal Disbursement, the College has 90 days from the withdrawal date to disburse those funds to the student's account.

Examples of return of funds calculations that may be made in accordance with Federal regulations and College policy may be obtained from the Financial Aid Office.

Students who withdraw from the College must initiate the process by completing an Exit form. This form requires various departmental signatures and is available from the Registrar's Office. For students receiving financial aid, the Financial Aid Office will initiate the refund process.

Tuition and Fees Undergraduate Programs

Tuition Pricing Effective Spring 2014

Full-Time (12-16 Credits) Tuition and Expenses Per Semester	Without Housing	With Student Housing
Tuition Per Semester	$7,990	$7,990
Student Activities Incidental Fee	$40	$40
Technology Fee	$50	$50

Housing Fee	$0	$3,600
Estimated Total	**$8,080**	**$11,680**

Part-Time (1-11 Credits) Tuition and Expenses Per Semester	Without Housing	With Student Housing
Tuition Per Credit	$625	$625
Student Activities Incidental Fee	$40	$40
Technology Fee	$50	$50
Housing Fee	$0	$3,600
Estimated Total	**$3,840 - $6,965**	**$7,440 - $10,565**

Other Charges and Fees	
Late registration fee (continuing students)	$40 per class (non-refundable)
Official Transcripts and Documents*	$10
Application for Graduation	$100
Credit by Examination Fee	$75
Diploma Reprint Charge	$75
Student ID card Replacement	$10
Technology Fee	$50 per semester
Associate Student Body Fee	$40 per semester
Lab Fees	$50 per class per semester (if applicable)
Deposit**	$300

* The first three official transcripts and/or documents are free. More details are provided on transcripts section of the catalog.

**Refundable when the student moves out.

- Tuition is the same for in-and out-of-state students.
- The Student Activities Incidental Fee funds the Cogswell ASB, the student run organization that plans events and advocates for student needs.
- The Technology Fee is a set fee that makes it possible for Cogswell to update computer labs and equipment regularly.
- Student Housing fees are effective beginning Summer 2013. Housing fees are $3,600 for a shared room in a shared apartment per semester. Students are required to pay a $300 refundable deposit to secure their place in Housing.
- The following courses incur lab fees:
    - DAA100 2D Design 1
    - DAA105 Color Theory
    - DAA108 Introduction to Photography
    - DAA115 Figure Drawing 1
    - DAA210 Figure Drawing 2
    - DAA330 Figure Sculpture
- Tuition and fees are subject to change upon approval by the Board of Trustees.

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FINANCIAL AID

Cogswell College has a Student Financial Aid Office where students and their families develop a financial plan for meeting educational expenses. Students of Cogswell College may apply for scholarships, grants, or loans to assist with college expenses. Scholarships and grants are sums of money given to an eligible student to be applied toward the student's educational costs. Students do not repay scholarships or grants, but must meet specific requirements to receive them. Student and parent loans are also available to assist students with educational costs. These loans must be repaid according to specific terms. All students who receive Federal or State sponsored financial assistance must maintain satisfactory academic progress (SAP) as defined in the academic policies below.

Scholarship Programs

Cogswell has scholarship programs to assist both incoming high school students as well as transfer students. For complete program details, please contact the Financial Aid Office.

Financial Aid Programs

All students needing assistance should carefully review this section of the catalog and the Cogswell College website. Cogswell College participates in several Federal programs including the Pell Grant program, the Federal Supplemental Educational Opportunity Grant (FSEOG) program, the Federal Work-Study (FWS) program and the Federal Direct loan program. Residents of California and other participating states may be eligible to receive state grants and loans. Cogswell College scholarships and employment are also available to eligible students. Regulations and policies associated with financial aid can change frequently, so please contact the financial aid office and/or review the financial aid section of the Cogswell College Web site to obtain the most current information, materials, and assistance. All information in this section is subject to change without notice.

Application Information and Procedures

For U.S. Citizens and Eligible Non-Citizens

The first step in applying for financial aid is to complete the Free Application for Federal Student Aid (FAFSA). Cogswell College's school code (001177) should be listed on the FAFSA before it is submitted. By listing Cogswell College's school code, FAFSA data will be provided to the college electronically. The application can be completed online at: http://www.fafsa.ed.gov/. Applications may be selected by the Department of Education for a process called verification. If an application is selected for verification, the student (and parent, if applicable) will be asked to verify that the information reported on the FAFSA is correct. Required documents may include, but are not limited to an IRS Tax transcript, verification of untaxed income, household size, other family members in college, and proof of certain benefits received. Once all pieces of required documentation have been submitted to the financial aid office, analysis of this information and a decision on the request for assistance will be made.

For International Students

Students who are not U.S. citizens, permanent residents, or eligible non-citizens are not eligible for U.S. financial aid. For more information on eligible categories, please visit https://studentaid.ed.gov/eligibility

Free Application for Federal Student Aid (FAFSA)

Cogswell College strives to provide financial assistance to qualified students. The basic philosophy of the Cogswell College Financial Aid program is that the primary responsibility for meeting college expenses rests with the student and the student's family. Accordingly, earnings, savings, and other assets of the student and, where appropriate, parents' or spouse's resources are taken into consideration when making a determination of resources available to meet educational expenses. A contribution toward educational expenses from the student and family is calculated when the FAFSA is filed, and is reviewed by the Financial Aid Office. This need analysis calculation takes many factors into consideration including family income, assets, number of dependents, number of dependents in college, age of parents, and state of residence. Also included is an expected contribution from the student's earnings and the student's assets. These result of these factors results in a number called Expected Family Contribution (EFC). The EFC is used to determine eligibility for the Federal Pell Grant, as well as other financial aid programs.

The EFC is subtracted from a standard student budget, which is based on average educational and living costs to determine the student's need for assistance. A financial aid package, which may consist of one, two, or more types of aid will be created using this data. The amount of need-based aid, which includes grants, federal work-study, and some types of student loans and scholarships, cannot exceed determined financial need.

If a major change occurs in the financial circumstances of the student, or student's family during the academic year, that change should then be reported to the financial aid office immediately. Other changes that should be reported are a change in a student's credit load (i.e., from 12 credits to 9 credits) or in housing arrangements (i.e., from on-campus to off-campus). It is the student's responsibility to report all such changes.

Withdrawal from the College before the completion of the academic period for which an award has been made may result in an adjustment of awards. This may require the student to return aid funds to the U. S. Department of Education. The return of funds calculation is independent of institutional refund policies, and may also result in funds due to the College from the student.

Cost of Attendance

A student's Cost of Attendance, also known as the student's budget, includes both direct and indirect expenses. Direct expenses are costs that are charged to the student's bill and paid directly to the college, such as tuition and fees. Indirect costs are expenses incurred, but are not directly paid to the College, such as travel and personal expenses.

Student budgets are based on full-time attendance for a nine month academic year, consisting of two semesters of 12-16 credits each. Budget categories include: tuition, fees, room and board, transportation, books and supplies, loan fees, and miscellaneous expenses. Fees/costs not included include, but are not limited to:, breakage deposit (on-campus students only). Additional charges/fees not listed in this section may apply.

Initial financial aid awards are based on full-time enrollment and anticipated living arrangements. Any changes to enrollment (i.e., from full-time to part -time), changes in living arrangements (such as moving from on-campus housing to an apartment off campus) may result in adjustments to the financial aid budget and award. Such changes must be reported directly to the Financial Aid Office.

Individual adjustments for expenses connected to a disability or for child care while the student is in school may be made based on individual circumstances, and documentation is required. For more information, please contact the Financial Aid Office.

Financial Aid Award Packages

There are three basic types of financial aid: Grants and Scholarships are frequently referred to as gift assistance because they do not have to be repaid. Self-Help/Federal Student Loans offer a low interest rate, and repayment usually begins after the student has left school or is enrolled less than half-time.

Self-Help/Work assistance allows the student to work on campus. It is part-time employment during the school year and may include summer employment as well.

Applicants are considered for all categories of assistance for which they may qualify. Students should thoroughly review the award letter, as well as Cogswell College website resources, to be aware of their rights and responsibilities in regard to financial aid.

Students may accept or decline all or any part of the financial aid package offered on the Award Letter in writing or by notification to the Financial Aid Office. Students may need to complete additional documents for programs such as work-study and loans. Financial aid will not be credited to the student's account until all documents are complete. Loan funds are credited to the student's account to offset charges.

Federal Work-Study is paid no less than once monthly, directly to the student for hours worked in the pay period. If financial aid credited to a student's account exceeds his or her charges, the student may receive a refund check, request funds are returned to the lender, or request funds be kept on account for future charges. For more information on student accounts, please contact the Financial Aid Office.

Statement of Educational Purpose

All recipients of Federal grant, loan, and work-study programs are required to sign a Statement of Educational Purpose which states that all Federal aid received will be used solely for expenses related to attendance or continued attendance at Cogswell College This statement is signed by all students who file the FAFSA – no separate Statement of Educational Purpose is required unless specifically requested by the Financial Aid Office.

Types of Financial Aid

Cogswell College participates in the following programs:

Federal Pell Grants

The Pell Grant is a federally funded grant program designed to form the foundation of all aid received. Pell Grant funding is available to undergraduate students who demonstrate financial need and have an Expected Family Contribution (EFC) at an eligible level as determined by Congress. To be considered for this type of aid, a student must: complete the Free Application for Federal Student Aid (FAFSA), list Cogswell College's school code (001177) in the appropriate section and submit the FAFSA to the central processor for review.

The amount of a Pell Grant award varies depending upon eligibility, the cost of attendance, and the number of credits for which the student is enrolled (full-time, three-quarter-time, or half-time). Changes to enrollment status can change the Pell Grant eligibility/amount. A student must be enrolled in an undergraduate course of study for at least 3 credit hours per semester to be considered for a Pell Grant.

Lifetime Limit for Pell Grants

Pursuant to federal regulations, a student's eligibility to receive a Federal Pell Grant will be equivalent to a 6-year limit to receive Federal Pell Grant funds for undergraduate students. For information on how the lifetime limits for Pell Grants are calculated for the "equivalent of six years" visit https://studentaid.ed.gov/types/grants-scholarships/pell

Federal Supplemental Educational Opportunity Grants

Federal Supplemental Educational Opportunity Grants (FSEOG) are for students who demonstrate exceptional financial need (with priority given to Pell Grant recipients). This is gift aid; it does not have to be repaid. To be considered for this type of aid, a student must: complete the Free Application for Federal

Student Aid (FAFSA), list Cogswell College's school code (001177) in the appropriate section and submit the FAFSA to the central processor for review. A FSEOG grant amount will depend on a student's financial need and available funds.

Federal Work-Study

The Federal Work Study program provides employment opportunities on campus or, in some instances, with off-campus agencies while the student is enrolled in school. This program helps students to pay for educational expenses. Eligible students are limited to part-time employment during the academic year. A limited number of assignments are available, with priority given to students with the greatest need. The maximum students can earn through this program is the amount of their unmet need (the difference between expenses and all their resources).

Eligibility is based on need and available funds. To be considered for this type of aid, a student must: complete the Free Application for Federal Student Aid (FAFSA). To maintain eligibility for Federal work-Study, a student must be enrolled at least half–time during the academic year.

State Grants

Cal Grant

Cogswell College is approved by the California Student Aid Commission for students to receive Cal Grant funds under Cal Grant A and B programs. Cal Grant programs require academic qualifications and financial qualifications as derived from the Student Aid Commission Grade Point Average (GPA) Verification form. Both the Free Application for Federal Student Aid (FAFSA) form and the GPA Verification (Cal Grant application) must be completed and postmarked by March 2 each year. These funds are not guaranteed. The state reserves the right to change, reduce, or eliminate any of the programs described below based on state law and budget limitations.

State Aid can be separated into three categories:

1. Cal Grant A
2. Cal Grant B
3. Chafee Grant for Foster Youth

For more information, and for any changes or revisions, visit http://calgrants.org and http://csac.ca.gov.

Disbursement

Cal grant funds are deposited into the student's account each semester.

The Cal B Access grant is designated for costs including living expenses, transportation, supplies, and books.

The student has the right to request, in writing, a direct refund of the Access grant and that it be excluded from paying the outstanding balance on the student account. Please note that this option may cause an outstanding balance on the student's account, and an outstanding balance will prevent class registration.

Cal B Access authorization forms are available in the Financial Aid Office.

Chafee Grant for Foster Youth

Please contact the California Student Aid Commission (CSAC) for more information on the qualifications needed, how to apply, yearly amounts, and disbursement information. For more information, visit http://csac.ca.gov.

The California Student Aid Commission may be reached by phone at (888) 224-7268 or at www.csac.ca.gov/.

Other State Grant Programs

State grant programs may also be available for students who are not California residents. Those students are encouraged to contact the appropriate state agency for more information and to apply.

Loan Programs

Direct Loan Program

Federal Direct Loans, also known as Federal Stafford Loans, are low-interest loans made to eligible students attending school on at least a half-time basis. A student may be eligible for Direct Subsidized loans, Direct Unsubsidized loans, or both. The subsidized loan is need-based and the government will pay the interest that accrues on your Direct Subsidized loan while in school. The Direct Unsubsidized loan is non-need based and the student is responsible for the interest that accrues on the loan while in school and during deferment and grace periods.

To be considered for Direct Loans, a student must: complete the Free Application for Federal Student Aid (FAFSA). Annual and lifetime loan limits are determined by federal regulations. The Financial Aid Office will determine the student's eligibility within these limits. Borrowing limits vary depending if the student is considered dependent or independent on the FAFSA, and based on class year as determined by number of credits earned toward the degree. In addition, the Direct Subsidized Loan may be subject to time limits. This time limit does not apply to Direct Unsubsidized Loans or to Direct PLUS Loans. For more information on the Subsidized Loan program, go to https://studentaid.ed.gov/types/loans/subsidized-unsubsidized .

Application/Disbursement Process

A student is notified of their Direct Loan eligibility as shown on the Award Letter. All students who wish to borrow the offered Direct Loan must:

1. First-time borrowers must complete Entrance Counseling and the Direct Loan Master Promissory Note (MPN). Entrance Counseling and the MPN must be completed before a Direct Loan can be processed. Entrance Counseling informs the student of their rights and responsibilities as a loan borrower. The MPN is the promise to pay back the loan according to the terms of the note. Both Entrance Counseling and the MPN can be completed online at http://www.studentloans.gov. Once all application requirements are met, and the student remains eligible, the loan will be processed by the school and funds will be disbursed in two disbursements, one- half for the first semester on the student's award letter and one half for the second semester. Funds will go directly to the school, and be applied towards the student's account. Should any funds remain once the semester's balance is paid in full, the remaining (semester) amount will be given to the student as a refund check unless the student requests otherwise. Request forms are available in the Financial Aid Office.

Terms

Direct Loans require repayment. After a student graduates, leaves school or drops below half-time, a student has a six month grace period before beginning repayment. For Direct Subsidized loans, neither the interest nor the principal needs to be paid during the in-school period. For Direct Unsubsidized loans, the student will be responsible for the interest from the time the loan is disbursed until the loan is paid in full. Interest may be paid while in school, or accrued and capitalized upon the beginning of the repayment period. Interest rates change annually, and are available from the Financial Aid Office.

Deferments

Direct Loan Deferments are available for those who return to at least half-time study at an eligible institution, graduate fellowships, rehabilitation training, or during unemployment and economic hardship. A student may be granted periods of Forbearance if not eligible for a deferment. Loans are canceled in the event of the death

or permanent and total disability of the borrower. Deferment and Forbearance should be requested from the student's loan servicer. Sign in to www.nslds.ed.gov to view federal loan history and servicer information.

Default

Default occurs when a Direct Loan borrower in repayment fails to make a payment for 270 days. The consequences of default are severe. The College, the lender or agency that holds your loan, the state and the federal government may all take action, including notifying national credit bureaus of your default. This may result in a negative credit rating for as long as seven years. In addition, the Internal Revenue Service can withhold your U.S. individual income tax refund and apply it to the amount you owe, or the agency holding your loan might ask your employer to deduct payments from your paycheck. Also, loans in default may be subject to loan collection. Borrowers with loans in default are not eligible for any federal financial aid until the student loan default is resolved.

To avoid default, Cogswell College advises student loan borrowers to keep in touch with their servicer: It always is best to deal with your servicer directly as soon as trouble arises and to not wait to resolve issues at the last moment. It is important that your servicer knows where to reach you. Always keep your loan servicer updated with your correct address and phone number. To find your loan servicer, login to https://www.nslds.ed.gov

Cancellations for Current Students

If a borrower wishes to cancel his or her loan or return extra loan funds, he or she must contact the Financial Aid Office. More loan information regarding borrowing, repayment, cancellations, repayment reductions, etc, is provided by the Federal Student Aid Information Center (call toll-free) at 1-800-4-FED AID or (1-800-433-3243). More information regarding the Direct Loan program is also available from https://studentloans.gov.

Exit Counseling

Exit Counseling is required for all Direct Loan borrowers who enroll for less than six (6) credit hours per semester or leave Cogswell College for any reason. Exit Counseling will provide useful information regarding the repayment process, deferment, forbearance, and in-school deferment. The session is required even if the student plans to return to Cogswell College in the future, or transfers to another school. Exit counseling can be completed online at: https://studentloans.gov

Contact Information

You may contact Direct Loans at: 1-800-557-7394, or go to https://studentloans.gov

Locate Your Federal Loan History

Check your student loan history at the National Student Loan Data System: www.nslds.ed.gov. Note that this system only records federal grant and loan programs – non-federal programs, such as the alternative and state loan programs will not be listed on this site.

Direct Parent PLUS Loan

A Federal Direct Parent PLUS loan is a loan that allows a parent to borrow for the educational expenses of a dependent undergraduate student. To be considered for this type of aid, a student must: complete the Free Application for Federal Student Aid (FAFSA) . Also, the parent must complete a credit check and a Direct Loan Master Promissory Note. Students whose parent is declined PLUS may be eligible for additional Direct Loan funds. More information and the application details are available on the Cogswell College website, or by contacting the Financial Aid Office.

Loan Limits

PLUS Loan borrowing limits vary with each student. The yearly limit is equal to the student's cost of attendance minus any other financial aid. More information, including interest rates is available at http://www.studentloans.gov. The repayment period for a Direct PLUS Loan begins at the time the PLUS loan is fully disbursed, and the first payment is due within 60 days after the final disbursement. The parent borrower may choose to have the repayment deferred, while the student for whom the parent borrowed is enrolled at least half-time and for an additional six months after the student no longer is enrolled at least half-time, however, it must be requested by the parent borrower. Interest that accrues during these periods will be capitalized if not paid by the parent during the deferment.

Private Education Loans

Private Education loans are also known as Alternative loans, are obtained for meeting the educational expenses by the students who are pursuing higher studies and who meet the eligibility criteria of the lender. Private loans are not federally guaranteed and are based on the credit worthiness of the student. Students should opt for private educational loans only if the funds raised through grants, scholarships and Federal loans are insufficient. The rate of interest chargeable for private educational loans differs depending upon the terms and conditions of the lending institutions. As the regulation of the Federal Government, student must sign and submit a self-certification to the lender for obtaining private student loans.

Veteran's Benefits

Cogswell College is approved for the training of Veterans by the California State Approving Agency for Veterans Education (CSAAVE). For benefit eligibility information, call 1-888-GIBILL1.

Additional Informational Resources

About the General Financial Aid Process:

www.mappingyourfuture.org - Mapping Your Future – Learn about financial aid and the application process.

http://www.studentaid.ed.gov - U.S. Department of Education's Student Aid Programs information.

www.fafsa.gov – Complete the Free Application for Federal Student Aid (FASFA) online, add Cogswell College's school code (001177) make corrections, and e-sign.

Federal Student Aid Information Center: 1-800-4-FED-AID, (1-800- 433-3243) or 319-337-5665

www.pin.ed.gov – go here to request or retrieve a FAFSA PIN Number. A FAFSA PIN number is needed to electronically sign your FAFSA; electronically sign the Direct Loan Master Promissory Note,

Suspension and Reinstatement of Financial Assistance

Students who are suspended from a program of study or terminated from Cogswell College are ineligible for financial assistance until they regain admission and comply with satisfactory academic progress requirements.

Rights and Responsibilities of Students Receiving Financial Assistance

Students have the right to:

- Know what financial aid programs are offered at Cogswell College
- Know the criteria for continued student eligibility under each program

- Know how the college determines whether the student is making satisfactory academic progress (SAP), what the consequences are of failing to make SAP, and how to reestablish eligibility for financial assistance
- Know the method of disbursement of financial aid funds and the frequency of the disbursements
- Know the terms of any loans received as part of the financial aid package; receive a sample loan repayment schedule, and the necessity for repaying the loans.
- Know the general conditions and terms applicable to any employment provided as part of the financial aid package
- Be supplied with exit counseling information upon graduation, dropping below half-time status, or exiting the College
- Know how financial need is determined
- Know how cost of attendance is determined
- Know the institutional policy and the Title IV policy for withdrawals refunds
- Know the terms and conditions under which students receiving Federal education loans may obtain deferments and/or loan forgiveness.

Students have the responsibility to:

- Complete the financial aid forms accurately and submit it on time to the right place. Intentional misrepresentation on an application for federal financial aid is a violation of law and a criminal offense subject to penalties
- Submit a FAFSA and other required documents every award year for continued eligibility in the federal and state aid programs
- Maintain satisfactory academic progress to continue receiving financial aid
- Check their Cogswell e-mail account for important financial aid information
- Complete loan entrance counseling prior to receiving the first disbursement of a Stafford loan for first-year, first-time borrowers
- Understand the College's refund policy and Title IV refund policy
- Repay any student loans borrowed
- Complete loan exit counseling when a student is exiting or graduating from the College and has Federal education loans
- Notify the Financial Aid Office of a change in name, address or attendance status
- Submit all documentation including verification requests, corrections, and new information requested by the Financial Aid Office
- Understand that all financial aid is contingent on the individual student's continued eligibility and the availability of funds
- Understand all forms and agreements they sign and keep copies for their records.
- Complete financial aid forms accurately and on time.
- Contact the Financial Aid Office with any questions or for assistance.
- Intentional misrepresentation on an application for federal financial aid is a violation of law and a criminal offense subject to penalties

GENERAL POLICIES

Family Education Rights and Privacy Act

Cogswell College complies with the Family Education Rights and Privacy Act (FERPA) regulations (also known as the Buckley Amendment (1974)). This act affords students certain rights to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the College receives the request
2. The right to request the amendment of the student's education records that the student believes is inaccurate
3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent
4. The right to prevent disclosure of Directory information (Name, Degree received, Major and dates of attendance)
5. The right to be annually reminded about his/her rights under FERPA
6. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA.

The name and address of the Office of Education that administers FERPA:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901
USA

The Buckley Amendment grants the College the authority to release directory information to any person on request, unless a student requests in writing that directory information be kept as private. The College directory information will be disclosed at the College's discretion. The College regards the following as directory information:

- Student's name
- Dates of Attendance
- Degrees/Awards Earned
- Major Field Study

It is important that parents have the opportunity to make informed decisions about the use of their student's directory information. However, there are times when schools must be allowed to implement policies that will permit them to effectively protect their students. As such, the Department of Education has also changed the directory information exception to state that parents may not, by opting out of directory Information, prevent a school from requiring a student to wear or present a student ID badge.

A copy of the Family Education Rights may be requested from the College or viewed at the following website http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html

The Clery Act

The JEANNE CLERY DISCLOSURE OF CAMPUS SECURITY POLICY AND CAMPUS CRIME STATISTICS ACT require postsecondary institutions to provide timely warnings of crimes that represent a threat to the safety of students or employees and to make public their campus security policies. It also requires that crime data be collected, reported, and disseminated to the campus community and to the Department annually. The CLERY ACT is intended to provide students and their families with accurate, complete and timely information about safety on campuses so that they can make informed decisions. Such disclosures are permitted under *FERPA*. The following Web site provides more information about these and other provisions about campus safety: http://www.ed.gov/admins/lead/safety/campus.html.

Crime Awareness and Campus Security Policy

General Statement of Compliance with the Student Right to Know Law and Campus Security Act. Cogswell College holds that students, staff and visitors have a right to be aware of the amount of criminal activity that occurs on its campus in accordance with Title II of the Student Right to Know Act of 1990. Cogswell College encourages all persons to report criminal activity that occurs on campus to the Facilities Manager and/or the appropriate law enforcement agency.

The campus safety and security report may be viewed in full at:
http://www.cogswell.edu/pdf/2013_CampusSafetySurvey_Crime%20Data.pdf

Security Services on Campus

Cogswell College personnel maintain a close working relationship with the local law enforcement agencies. The College will provide information on criminal activity to the law enforcement agency in whose venue the act occurs. The College will annually request from each law enforcement agency data indicating the criminal activity for each particular site in accordance with the Student Right to Know and Campus Security Act.

Crime Prevention

The College will publicize crime prevention information through the College's official publications. The College urges all members of the campus community to be responsible for their own safety and to assist in the prevention of crime.

Drug-Free Environment Statement

Consistent with state and Federal law, Cogswell College will maintain a campus free from the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance. The unlawful manufacture, distribution, dispensation, possession or use of controlled substances, illicit drugs and alcohol, are prohibited on any College owned or affiliated property. The following rules will be enforced uniformly with respect to all students:

1. No alcoholic beverages will be brought to, or consumed on College property or during College sponsored events. Moderate consumption of alcohol will be permitted at designated Cogswell gatherings or under circumstances expressly authorized by the College.
2. All students, while on campus, at a College sponsored event, or while performing College activities, are prohibited from being under the influence of alcohol.

3. The sale, possession, use, transfer, or purchase of an illegal drug or controlled substance on College property, during a College sponsored event, or while performing a College activity, is strictly prohibited.
4. No prescription drug will be brought to, or consumed, on College property during a College sponsored event, or while performing a College activity, by any student other than the one for whom it is prescribed. Such drugs should be used only in the manner, combination and quantity prescribed.

Sexual Harassment and Discrimination

Cogswell is dedicated to providing an environment free from discrimination and provides equal opportunities to all students in every aspect of Cogswell college life. Cogswell does not discriminate or harass on the basis of race, color, age, sex, national origin, religion, disability, medical condition, marital status, sexual orientation or any other basis protected by federal, state, or local law, ordinance or regulation.

Students who believe they have been harassed or discriminated should follow the Student Grievance and Complaint Policy, located in this Catalog. Additional information may also be found at the US Department of Education Office of Civil Rights: www.ed.gov/ocr.

Fire Safety

The fire safety report and information on fire safety may be obtained from the Dean of Students. Fire safety information is distributed annually and upon request.

Students with Disabilities Requesting Accommodations

Cogswell College complies with the provisions of the Americans with Disabilities Act of 1990 and with Section 504 of the Rehabilitation Act of 1973. The College will make every effort to assist students pursue their academic goals. If a student is requesting accommodations, they must provide appropriate documentation verifying the disability to the Dean of Students. The Dean of Students will work directly with the student in providing accommodations in accordance with applicable laws. A student is not required to disclose their disability, if they are not seeking accommodations.

Student Grievance and Complaint Policy

A non-academic student complaint may be a complaint related to civil rights, services, violation of FERPA Regulations, or other complaints not academic in nature.

If a student has a complaint, he or she should initially attempt to resolve that issue with the other person(s) involved no later than two weeks after the relevant incident/dispute. If the student is not satisfied with the outcome of that attempt, then he or she should submit a formal complaint, within 10 business days after the attempt to resolve the issue, by following the steps outlined below:

To file a formal complaint, the student must complete a formal letter outlining their Grievance and Complaint. The submission of this letter must be made to the Dean of Students. The Dean of Students will send an email acknowledging the initiation of the formal complaint process.

The Dean of Students will convene a meeting with the student either in person or via telephone conference call. The Dean will conduct any necessary investigation prior to the meeting. The Dean will make a recommendation taking all relevant factors into consideration.

If the student is unsatisfied with the response from the meeting with the Dean of Students, he/she may request a review of the complaint by the Dean of the College. At that time, the formal written complaint and the statement of facts as he/she understands them will be submitted to the Dean of the College. Within one

week of the time the Dean has received copies of the applicable documentation, at the Dean's sole discretion, grievance appeals may be held in one of the following two ways:

1. The Dean of the College will review the information provided by the student and administration. The Dean may convene a formal meeting with the student either in person or via telephone conference. Parties of interest may include the student, Dean of the College, and other official campus representatives deemed necessary. The Dean will render the final decision taking all relevant factors into consideration.

   OR

2. The Dean of College will appoint an ad-hoc committee who will consider the written appeal. A telephone conference may be scheduled with the parties in question. After careful deliberation and consideration, the committee will recommend to the Dean of the College what should be done in the case. The Dean of the College will render the final decision taking all relevant factors into consideration.

If after this process you are still not satisfied, you may submit your complaint to:

The Department of Consumer Affairs, Consumer Information Division, 1635 North Market Blvd., Suite N 112, Sacramento, CA 95834, or call (916) 574-7720.

You may also contact the State of California, Department of Justice, Office of the Attorney General, at http://oag.ca.gov/contact

Maintenance of Physical Plant Facilities with Security Considerations

The College is mindful of security needs in the daily operation of campus facilities. The planning and maintenance of campus facilities take into account the safety and security of persons on campus. The interior and exterior lighting systems on campus are constructed and maintained in such a manner as to provide a well-illuminated facility to help deter criminal activity. Locks and security devices are kept in working order.

Access to facilities is limited to those persons who have authority to use them. Campus buildings are locked and security systems activated when not in use, and are unlocked by designated College personnel at times to coincide with their accepted use.

Copyright Infringement

Copyright infringement is the act of exercising, without permission or legal authority, one or more of the exclusive rights granted to the copyright owner under section 106 of the Copyright Act (Title 17 of the United States Code). These rights include the right to reproduce or distribute a copyrighted work. In the file-sharing context, downloading or uploading substantial parts of a copyrighted work without authority constitutes an infringement. Penalties for copyright infringement include civil and criminal penalties, and may result in disciplinary action, up to and including dismissal from the College.

Civil and criminal penalties for copyright infringement may include:

Persons found liable for civil copyright infringement may be ordered to pay either actual damages or "statutory" damages affixed at not less than $750 and not more than $30,000 per work infringed. For "willful" infringement, a court may award up to $150,000 per work infringed. A court can, in its discretion, also assess costs and attorneys' fees. For details, see Title 17, United States Code, Sections 504, 505. Willful copyright infringement can also result in criminal penalties, including imprisonment of up to five years and fines of up to $250,000 per offense.

For more information, please see the website of the U.S. Copyright Office at www.copyright.gov.

For more information on copyright, and legally acceptable alternatives, please contact the Information Technology Department.

Voter Registration

Cogswell College encourages all eligible students to exercise their right to vote.

Voter registration forms are available at the office of the Dean of Students. In addition, links to register to vote will be made available on the Student Portal.

Students are notified via email each Fall.

For more information on participating in elections, go to:

http://www.usa.gov/Citizen/Topics/Voting.shtml

For information on voting in California, go to:

http://www.sos.ca.gov/elections/

ACADEMIC POLICIES

Academic Freedom

Institutions of higher education are conducted for the common good, and not to further the interest of merely either the individual teacher or the institution itself. The common good depends upon the free search for truth and its free exposition.

Academic freedom is essential for these purposes, and applies to both teaching and research. Freedom in research is fundamental for the advancement of truth. Academic freedom in its teaching aspect is fundamental for the protection of the rights of a teacher in teaching, and for the student to freedom in learning. It carries with it both rights and responsibilities.

Cogswell Polytechnical College endorses the 1940 Statement of Principles and 1940 and 1970 interpretive comments of the American Association of University Professors on academic freedom, which includes in substance, but is not limited to:

Academic Freedom:

- The teacher is entitled to full freedom in research and in publication of the results, subject to the adequate performance of his/her other academic duties.
- The teacher is entitled to freedom in the classroom in discussing his/her subject, but he/she should be careful not to introduce into his/her teaching controversial matter which has no relation to the subject.
- The college or university teacher is a citizen, a member of a learned profession, and a member of the educational community. When he/she speaks or writes as a citizen, he/she should be free from institutional censorship or discipline, but his/her special position in the community imposes special obligations. As a person of learning and an educator, he/she should remember that the public may judge his/her profession by his/her written or verbal statements. Hence, he/she should at all times be accurate, should exercise appropriate restraint, and should show respect for the opinions of others.

Maximum Academic Load

The maximum load for undergraduate degree students is 16 semester credit hours, including audited courses. An undergraduate student who under special circumstances wishes to take more than 16 credit hours must obtain written permission via the Add/Drop process.

The recommended maximum load for graduate degree students is 6 semester credit hours per session.

Credit Hour Definition

A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than:

(1) One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester, or the equivalent amount of work over a different amount of time; or

(2) At least an equivalent amount of work as required in paragraph one (1) of this definition for other academic activities as established by the institution, including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

One (1) hour of classroom or direct faculty instruction is defined by one (1) hour of class meeting time that is made of 50 minutes of lecture plus 10 minutes of “break time”.

Lecture Credit Hour

Given a 15-week semester, one lecture credit hour represents one hour per week of scheduled class time and two hours of out of class preparation time. A three-credit hour class represents 45 hours of class time and 90 hours of student preparation during a semester.

Laboratory Credit Hour

Given a 15-week semester, one laboratory credit hour represents 2 hours per week of laboratory work.

Internship/Practica Credit Hour

Internship/practica hours are determined by the supervising faculty and the work supervisor at the cooperating site if applicable, both of whom must judge and certify different aspects of the student's work. This in turn represents between 45 and 60 hours of work per semester. Three (3) credit hours represents between 135 and 180 total hours of academic work per semester.

Course Requirement Substitution

Course substitution requires approval of the Academic Advisor and approval of the Program Director. Academic Advisor can initiate a course substitution request. A student may substitute a maximum of 16 credit hours of coursework. All prerequisites must be met.

Additional Degrees

A student may receive more than one degree from Cogswell College. To enroll for an additional degree, current students must submit an approved Change of Program Form with the required signatures to the Registrar's Office. A student must complete all graduation requirements for each degree received.

Change of Program

A student may change programs by completing a Change of Program Form available from the Registrar's Office (or from the Cogswell website) and obtaining the required signatures. All course and admissions requirements for the new program must be satisfied to qualify for the degree sought. A change of program does not change the student's academic standing (Satisfactory Academic Progress). The transaction is not official until the Change of Program Form is processed by the Registrar's Office and a new degree plan is assigned. Students are limited to a maximum of three (3) changes of program.

Add/Drop & Withdrawal from a class

Students may add a class only within the first week of a semester. Students may drop a class within the Add/Drop period without financial penalty. Any drop after the Add/Drop period is considered a withdrawal and the student will receive a withdrawal grade (W) if it is within the withdrawal period. Please refer to the Academic Calendar.

Withdrawal from the college

The Exit Form must be completed by the student wishing to withdraw. The Exit Form must then be submitted to the Registrar.

Attendance Policy

Instructional Delivery Methods

On-Campus (Residential)

Residential courses meet on campus in a traditional classroom and/or laboratory environment.

Online

Online courses are offered through an online learning management system (LMS). Students have access to their online courses 24 hours a day; 7 days a week.

Students must have a minimum cumulative grade point average (CGPA) of 2.75 to register for an online course. Incoming new students (i.e., freshman, transfer) will be assessed on the last attended academic institution.

Hybrid

Hybrid courses are offered as a combination of traditional classroom and/or laboratory environment and via the use of an online learning management system (LMS). Typically, instructional time consists of 50% of on campus meeting while the other 50% of instruction and/or assignment time is via LMS.

NOTE: Percentages may vary depending on class, student, and/or instruction needs.

On-Campus Attendance Policy

Cogswell students are expected to attend every class session scheduled for each course in which they enroll. Students who miss a class must arrange with instructors to take any examination or complete any make-up work at an alternate time. The following are the attendance policies that apply to all students at Cogswell:

- A student that does not attend course(s) by the first day following the add/drop period will be withdrawn from the College.
- A student that does not attend an individual class for 14 consecutive calendar days will be withdrawn from the class by the College. A withdrawal "W" grade will be given if withdrawal occurs on or prior to the last day to withdraw deadline. A withdrawal after the last day to withdraw will be assigned a withdrawal fail "WF" grade.
- A student that is absent from all classes for 14 consecutive calendar days will be withdrawn from the school and subject to the refund policies. For each registered course, a withdrawal "W" grade will be given if withdrawal occurs on or prior to the last day to withdraw deadline. A withdrawal after the last day to withdraw will be assigned a withdrawal fail "WF" grade for each registered course.

Students may appeal the attendance policy as described in the Attendance Appeal Policy.

Online/Hybrid Attendance Policy

Cogswell provides two distance learning delivery methods with the utilization of a Learning Management System (LMS): e.g., 'Online' and 'Hybrid.' Distance learning courses are held Monday through Sunday.

Cogswell students registered for online courses are encouraged to participate often in each course they enroll. At a minimum, a student must submit a gradable item each week. A gradable item is defined as a threaded discussion, assignment, test, or quiz.

Cogswell students registered for hybrid courses will require students to attend, at the least, once a week in class lecture while submitting assignments via LMS.

The following are the attendance policies that apply to all students at Cogswell enrolled in any distance learning delivery method:

- A student that has not submitted a gradable assignment in any class by the first day following the add/drop period will be withdrawn from the College.
- A student that does not participate in an individual class for 14 consecutive calendar days (two (2) weeks) will be withdrawn from the class by the College. A withdrawal "W" grade will be given if withdrawal occurs on or prior to the last day to withdraw deadline. A withdrawal after the last day to withdraw will be assigned a withdrawal fail "WF" grade.

• A student that is absent from all classes for 14 consecutive calendar days (two (2) weeks) will be withdrawn from the school and subject to the refund policies described below. For each registered course, a withdrawal "W" grade will be given if withdrawal occurs on or prior to the last day to withdraw deadline. A withdrawal after the last day to withdraw will be assigned a withdrawal fail "WF" grade for each registered course.

Students may appeal the attendance policy to extenuating circumstances as described in the *Attendance Appeal Policy*.

Holidays and Scheduled Breaks

Holiday and school breaks are not included in the 14 consecutive calendar days. If the 14th consecutive day falls on a day that class is not in session, the following regularly scheduled class day will be used. For listing of holidays or scheduled breaks, refer to the Academic Calendar available in this Catalog or college website.

Attendance Appeal Policy

Students seeking an appeal of the withdrawal notification due to violation of the attendance policy must appeal to the Registrar's Office within seven (7) calendar days from the date of the withdrawal.

Leave of Absence Policy

In limited circumstances, the College allows a student to take an approved leave of absence (LOA). An approved LOA is a temporary interruption in a student's education and is not considered a withdrawal from the school. An unapproved LOA will be treated as a withdrawal from the school. A leave of absence must meet the following requirements to be an approved LOA:

• All requests for leave must be submitted in advance and in writing by the student. The LOA request must include the reason for the leave and signed and dated by the student. The request should be submitted to the Registrar's office for approval. In rare circumstance, the student may not be able to apply for the LOA in advance (i.e. car accident, incapacitation); however, with proper documentation the LOA may be granted by the institution.

• The leave is for a specified period of time with a scheduled return date not to exceed 180 days in any 12-month period. All leaves in a 12-month period are combined when calculating the 180 day rule.

• Approval may be denied if the reason for the leave is not justification for interrupting the student's education, or if there is not a reasonable expectation of return.

If a student fails to return from the LOA on the specified return date, the student will be considered withdrawn from school and may have an impact on the student's loan repayment terms, including the expiration of the student's grace period.

Students on leave, whether approved or unapproved, are not eligible to live in student housing.

Internship Program

An internship is expected to add to the educational experience of the student. Therefore, to register for the course students are required to obtain authorization from their academic advisor along with the internship coordinator. The academic advisor reviews the internship for various factors to determine if the experience fits within the academic needs of the student. The responsibility of the internship coordinator is to provide input regarding the viability of the internship site.

Class Standing

The class standing of an undergraduate student is determined as follows:

Freshman	0 - 30 semester credits successfully completed
Sophomore	31 - 60 semester credits successfully completed
Junior	61 - 90 semester credits successfully completed

Senior More than 90 semester credits successfully completed

Grading System and Grade Points

The College uses the following four-point grading system:

Cogswell Grade Scale					
Letter Grade	**Grade Point Value**	**Cutoff Percentage**	**Description**	**Calculated in GPA?**	**Credit Earned?**
A+	4.0 (with distinction)	97.0	Letter grade	Yes	Yes
A	4.0	94.0	Letter grade	Yes	Yes
A-	3.7	90.0	Letter grade	Yes	Yes
B+	3.3	87.0	Letter grade	Yes	Yes
B	3.0	84.0	Letter grade	Yes	Yes
B-	2.7	80.0	Letter grade	Yes	Yes
C+	2.3	77.0	Letter grade	Yes	Yes
C	2.0	74.0	Letter grade	Yes	Yes
C-	1.7	70.0	Letter grade	Yes	Yes
D+	1.3	67.0	Letter grade	Yes	Yes
D	1.0	64.0	Letter grade	Yes	Yes
D-	0.7	60.0	Letter grade	Yes	Yes
F	0.0	< 60.0	Letter grade	Yes	No
Other Grades					
AF	N/A	N/A	Administrative Fail. Administration or Faculty unable to issue a grade.	No	No
AU	N/A	N/A	Audit	No	No
CR	N/A	N/A	Credit earned, C or better	No	Yes
I	N/A	N/A	Incomplete. This is a temporary grade.	No	No
NP	N/A	< 74.0	No pass. Unsatisfactory, "C-" or below.	No	No
P	N/A	74.0	Pass. "C" or better	No	Yes
T	N/A	N/A	Transfer credit awarded	No	Yes
W	N/A	N/A	Withdrawal	No	No
WF	0.0	0.0	Withdrawal Fail	Yes	No

Academic Honors

The President's Honor Roll

Recognizes undergraduate students who have completed six (6) or more credits coursework during the semester with a 3.80 grade point average or better.

The Dean's Honor Roll

Recognizes undergraduate students who have completed six (6) or more credits coursework in a semester with a 3.50-3.79 grade point average.

Academic honors are noted on a student's official transcript and grade reports.

Incomplete

An Incomplete ("I") grade may be used if the student has essentially completed the course except for a missing examination, project, or paper due to circumstances beyond the student's control. An Incomplete is not considered a grade, and will not satisfy the prerequisite requirement of any subsequent course.

It is the responsibility of the student to bring pertinent information to the instructor regarding why s/he cannot fulfill all the work during the current semester and to reach agreement on the means by which the remaining course requirements will be satisfied. If the instructor agrees, the instructor will submit a Petition for Incomplete Grade form with an "I" grade for that course for that semester.

It is a student's responsibility to follow up with the instructor to remove an Incomplete. The instructor will assign a final grade when the work agreed upon has been completed and evaluated. The instructor will then submit a Change of Grade form to the Registrar for processing.

Incomplete grade changes must be cleared the sooner of the end of the next term which the student is enrolled or four (4) calendar months. The instructor can require a date sooner than the above. Failure to meet deadlines will result in the assignment of an F grade for the course unless a deadline extension is approved.

Pass/No Pass

Any developmental/remedial or internship coursework completed will be evaluated on a pass "P" or No Pass "NP" basis. Developmental/remedial coursework completed does not apply towards requirements for graduation.

For purposes in determining if student has successfully met satisfactory academic progress (SAP) standards, pass/no pass grades do not count towards the cumulative grade point average (CGPA), a qualitative standard; however, it will be included in the quantitative standard in determining pace of completion.

Audit

A student may choose to audit a non-required course. An auditor is allowed to participate in class discussions and take exams, but will not receive unit credit or a grade. The grade report and official transcript for the course will indicate "AU" rather than a letter grade. An audit grade may not be changed to a letter grade. An audited course does not satisfy a prerequisite requirement, cannot be subsequently challenged, and may not be used to waive a graduation requirement or for determining financial aid awards.

Withdrawal Grade

A student may withdraw by the last day to withdraw and receive a "W" grade. If a student withdraws after the last day to withdraw, the student will receive a "WF" grade. A student-initiated Add/Drop form must be submitted to the Registrar in order to withdraw.

Repeated Courses

A student may repeat a course that s/he previously passed with a low grade or failed. Only the highest grade will be used to calculate the cumulative grade point average. Grades will be included in the GPA calculation if a student chooses to repeat a course more than once. A student may not repeat a class more than twice without written approval from the Dean of the College.

Grade Appeal

If a student believes an incorrect grade for a course has been issued, the matter should be discussed with the instructor.

If a student is not satisfied with the instructor's explanation and action, the student may appeal to the Dean of the College. The Dean of the College will form an Appeal Committee. The student will be notified of a plan of

action within ten (10) business days. A decision on the grade appeal will be issued within six (6) weeks from the date of receiving the documented appeal form. The decision of the Dean of the College is considered final.

All grade appeals must be made within thirty (30) calendar-days after the grade is issued.

Satisfactory Academic Progress

It is necessary to measure satisfactory academic progress (SAP) to be eligible for federal student aid (FSA) and to become a Cogswell College graduate. SAP is measured at the end of each payment period. Failure to meet SAP standards may result in student being placed on financial aid warning, financial aid probation, and or dismissal from the College or dismissal of participation in financial aid programs. SAP is measured both at qualitative (i.e., cumulative grade point average) and quantitative (i.e., pace of completion) standards.

Program of Study	**Payment Period**
Undergraduate	*One (1) semester*
Graduate	*One (1) semester (two 8 week modules)*

Qualitative Standard

Cogswell College measures its undergraduate students' academic progress at the end of each payment period to ensure students are maintaining a minimum cumulative grade point average (CGPA) of at least 2.0. Students in a graduate program must maintain a CGPA of at least 3.0. Remedial coursework is included in the quantitative assessment of SAP; however, remedial courses are not included in the GPA.

Quantitative Standard

Cogswell College additionally measures students using a quantitative standard, pace of completion, to ensure successful completion of their program of study. The pace of completion is based on the number of credits completed versus the number of credits attempted. All students must complete their program of study without exceeding 150% of the published length of their program measured in credit hours.

The following chart is the benchmarks that must be achieved at the end of each semester for undergraduate programs:

Semester	Qualitative (CGPA)	Quantitative (Pace of Completion)
1 & 2	**2.0**	**50%**
3 & 4	**2.0**	**50%**
5 and after	**2.0**	**66.67%**

The following chart is the benchmarks that must be achieved at the end of each semester for graduate programs:

Semester	Qualitative (CGPA)	Quantitative (Pace of Completion)
1 & 2	**3.0**	**66.67%**
3 and after	**3.0**	**66.67%**

The following chart is how grades count for calculating completion rates and GPA for SAP purposes:

Grade	Credits Attempted (denominator)	Credits Completed (numerator)	Calculated in CGPA
>D	**Yes**	**Yes**	**Yes**

D-, F	**Yes**	**No**	**Yes**
W	**Yes**	**No**	**No**
WF	**Yes**	**No**	**Yes**
AF	**No**	**No**	**No**
AU	**No**	**No**	**No**
CR	**Yes**	**Yes**	**No**
I	**Yes**	**No**	**No**
P	**Yes**	**Yes**	**No**
NP	**Yes**	**No**	**No**
T	**Yes**	**Yes**	**No**

Financial Aid/Academic Warning

If a student fails to make SAP at the end of the payment period, the student is placed on Financial Aid/Academic Warning (FA/Academic Warning) for the next semester. The school will reinstate financial aid for one semester only. Students that fail to make SAP after the warning period will lose financial aid eligibility and may be dismissed unless they successfully appeal and are placed on Financial Aid/Academic Probation (FA/Academic Probation).

Financial Aid/Academic Probation

Students that fail to make SAP after the FA/Academic warning period but successfully appeal the results (see Appeals Process below) will be placed on FA/Academic probation. FSA eligibility will be reinstated for one semester while the student is on FA/Academic probation status.

SAP Appeals Process

Students that lose FSA eligibility due to SAP may appeal the result on the basis of injury or illness, death of a relative, or other special circumstances. The appeal must be submitted within one (1) week prior to the next semester start. The SAP Appeal Committee will meet and provide a response to the student within one (1) week of receiving the appeal response. At a minimum the SAP Committee will consist of one staff member from each department: Registrar's Office, Student Life, and Financial Aid.

Students receiving VA educational benefits will be placed on probation if their GPA is below 2.0. A maximum of two terms on probation is allowed. If at the end of two semesters the student's GPA remains below 2.0, benefits will be terminated.

The appeal must include the reason for failure to achieve SAP and the conditions that changed that will lead to making SAP at the next evaluation period. The student will be placed on FA/Academic probation during this period. If the student is denied the appeal, they will be dismissed from the program. If it is likely the student will meet the SAP standards by the end of the next semester, they may not be placed on an academic plan. However, if it is likely the student will not meet SAP standards by the end of the next payment period, the student will be placed on an academic plan. This plan will outline the steps the student needs to achieve in order to maintain eligibility. If the student achieves the objectives of the academic plan, they will be eligible for financial aid, to continue studies at the College, and be removed from FA Probation.

Plan of Action (Academic Plan)

The following are possible items to be included in a plan of action:

1. Reduction in number of hours attempted

2. Change in program (major)
3. Enrollment in specific courses prescribed by the Advisor
4. Re-enrollment in courses in which the student previously received a low or failing grade
5. Other measures recommended by the Advisor

Regaining Financial Aid Eligibility

Students who are dismissed and not reinstated will automatically be ineligible for future financial aid until such time that he/she is reinstated to the College by successfully appealing SAP ineligibility. A student whose appeal is approved and placed on FA Probation will be reinstated and must maintain a CGPA of 2.0 in undergraduate programs, or 3.0 for graduate programs, with a pace of completion above the metrics stated herein the SAP policy.

Maximum Time Frame

Student enrolled with Cogswell College must complete their program of study within 150% of the published program length measured in credit hours in order to graduate. For example a program that is 120 credits in length will only be allowed to attempt up to 180 credits (120*1.5 = 180 hours). If student fails to meet the maximum time frame to complete the program, they may pursue to complete their program of study; however, a student may not do so without successfully appealing with the College. If the appeal is approved the student may remain enrolled with the College but without the eligibility of financial student aid.

The following is the treatment of other areas impacting SAP:

- Remedial coursework is included in the qualitative assessment of SAP but is not included in the cumulative GPA.
- Transfer credits and credits earned through other institutionally accepted methods (i.e. CLEP) are included in units attempted and completed but not in the CGPA.
- Incomplete ("I") grade will not be counted as credits completed, however, the "I" grade does count as credits attempted. Once the "I" grade is replaced, at that point, SAP will be reevaluated.
- Withdrawal grades will be included in the credits attempted but not in the CGPA.
- Courses dropped within the Add/Drop period will not be included in either the qualitative or quantitative measurement of SAP
- Students may repeat a course and the highest earned grade will be used to calculate CGPA. Grades will be included in the GPA calculation if a student chooses to repeat a course more than once. Any courses that are repeated will count towards pace of completion.
- Students that have official withdrawn from the College or are on leave of absence are still subject to meet SAP standards.
- Returning students will resume their studies at the point at which they left off. A student will resume their studies under the same SAP status as when they left their original program of study.
- When a student changes majors or seeks to earn additional degrees, only courses that apply toward the new degree will be counted in calculating the number of credits attempted. If student changes major their SAP status remains the same as in their prior program of study.
- If a graduate of Cogswell College enrolls into a new program of study, only courses that apply toward the new degree will be counted in calculating the number of credits attempted.

Midterm Academic Performance

Midterm academic performance is reported by faculty before the eighth week of the semester. Following this point, students that are not maintaining a C average or higher GPA are notified by the Registrar's Office.

Student Success Services will schedule meeting time with any student that falls below the minimum midterm standard to create a Student Success Plan and advice students towards a successful academic progress. Students are also encouraged to meet with Academic Advisors to create a Student Success Plan.

The action plan may include, but not limited to, the following:

1. Review current schedule to identify, if any, course issues that may be impacting academic progress
2. Review future schedule to identify possibility of changes, dropping, or repeating course
3. Schedule regular meetings during the semester to monitor student's academic progress
4. Assist students with arranging tutoring sessions or any other form of support the College can provide

Undergraduate Graduation Requirements

To receive a degree in the program of study the student must achieve the following:

- Complete the course as prescribed in the academic catalog under which the student enrolled.
- Complete unit and course requirements with a minimum of a 2.0 cumulative GPA
- Complete their program of study within 150% of the published length of their program.

Graduate Graduation Requirements

To receive a degree in the program of study the student must achieve the following:

- Complete the course as prescribed in the academic catalog under which the student enrolled.
- Complete unit and course requirements with a minimum of a 3.0 cumulative GPA
- Complete their program of study within 150% of the published length of their program.

Application for Graduation Procedure

The graduation audit is the official confirmation of the completion of all the requirements for a degree. A graduation audit is also necessary to ensure all appropriate documents have been submitted to the Registrar's Office, and to ensure the student's academic file is complete before a diploma is awarded. Students should keep close track of all coursework completed and keep in regular contact their advisor. A student may initiate a graduation audit when he/she is within eighteen (18) credits of graduation.

To initiate a graduation audit a student must:

1. Request an Application for Graduation form from the Registrar's Office (also available from the website)
2. Submit appropriate fees to the Business Office
3. Return the completed Application for Graduation form to Registrar's Office.

A verification letter with the results of the graduation audit will be sent within one month of applying for graduation.

Fees: A one-time $100.00 fee is required for processing a graduation audit. The fee includes graduation expenses such as cap, gown and diploma.

Graduation Commencement Ceremony

Students who have completed the requirements for graduation are invited to participate in the Commencement Ceremony that is held in May each year.

Cogswell College seniors may apply early to participate in the commencement ceremony if they meet certain criteria. A student must be registered for the remaining courses to complete their program of study within one (1) term after the commencement ceremony.

A graduate or prospective graduate must complete a Commencement Participation Form. The form may be obtained through the Office of Student Affairs in order to walk in the Commencement Ceremony.

Graduation with Honors

A student who earns cumulative GPA of:

3.5 cum laude

3.8 magna cum laude

4.0 summa cum laude (highest honors)

Student Academic Responsibilities

It is the responsibility of students to:

1. Be aware of and comply with policies and procedures, deadlines, and graduation requirements found within this catalog and the Student Handbook.
2. Monitor progress toward completion of graduation requirements
3. Comply with the content of the Student Handbook and Student's Rights and Responsibilities.

Student Affairs

Academic Honesty

Academic honesty is a fundamental principle of the educational process. It is essential to maintaining the value of the academic degree students receive and the credibility of the institution.

Academic honesty is vital to the proper evaluation of the level of knowledge and understanding a student acquires in a course. This evaluation may be based on quizzes, exams, reports, homework, projects, and any other assignments used by the faculty to ascertain the student's command of the course material. Any willful act that invalidates the process of evaluation is an act of academic dishonesty.

The following activities are examples of academic dishonesty. The list is not comprehensive; any act that satisfies the above definition is to be considered academic dishonesty.

1. Alteration of grades or official records
2. Use of unauthorized materials or sources of information on exams
3. Changing already graded documents
4. Inventing or changing laboratory data
5. Use of purchased or acquired papers
6. Submission of homework, take-home exams, reports, and projects mostly prepared by another person
7. Representation of the work of others as one's own (plagiarism)
8. Facilitation or assistance in any act of academic dishonesty
9. Providing or getting information about the contents and answers for an exam prior to the time the exam is given
10. Altering another student's work or academic records.

Independent Study

In Independent Study, with the supervision and guidance of faculty, a student develops a research project, field study, practicum, or special readings proposal which centers on an area of study not included in the regular course(s). Independent Study is not to replace a course that was not successfully completed. In some cases, may be used as a substitute course. A student may enroll for one course of independent study in a semester. Students will be required to keep log of time, and submit assignments once or twice a week as required by faculty.

Independent Study presupposes a developed competency and maturity; consequently, participation in the program is restricted to students who have accrued a cumulative point average of 3.0 in the student's major. A student who does not meet the qualifying criteria, but develops a proposal which merits Independent Study status, should consult with a prospective faculty to assess the possibilities for successful completion of the project.

Procedures to be followed are:

1. Students requesting to take an Independent Study must request for a Permission Form from the Registrar's Office. The form must be completed prior to reviewing with a faculty member.
2. The student reviews the proposal of the Independent Study with faculty
3. With the agreement of the faculty sponsor, the proposal is submitted to the Dean of the College for approval.
4. Students must meet/submit assignments no less than once or twice per week.

STUDENT AFFAIRS

New Student Orientation

Cogswell hosts a mandatory orientation prior to the start of class. Orientation provides an opportunity for students to meet with faculty and staff. It also orients the student with College policy and procedures and their rights and responsibilities as a student. During the orientation students will receive their Student ID, User ID and passwords to access the Cogswell Student Portal.

ID Cards

The IT Office issues student ID cards at the beginning of each semester during registration. ID cards are required to check out books from the College Library and equipment from the audio/video lab.ID cards also provide access to the building during regular office hours as well as most labs and studios.

Student Housing

Cogswell Student Housing is available for qualifying students. Please contact the Office of Student Affairs for more information and for other housing resources.

Career Services

Cogswell's Career Services provides services and resources to students and alumni to assist in career preparation. Career workshops and coaching are offered on topics such as interviewing, resumes, cover letters, job search strategies, and portfolio preparation.

Website resources, magazines, books, bulletins, job descriptions, and salary information are among the resources available to students and alumni.

Tutoring

Cogswell College provides tutoring for students who request or require assistance with academic subject matter. Students interesting in receiving or providing tutoring services may obtain an application in the Office of Student Life.

Associated Student Body

The Associated Student Body (ASB) is the general student membership organization of the College. The purpose of the ASB is to give students the opportunity to plan and direct their own activities, to become involved with co-curricular campus activities, and to influence the decisions that affect the quality of education and student life at the College. All enrolled students are members of the ASB. The general student membership provides feedback to the Associated Student Body Executive Board.

The Associated Student Body Executive Board is comprised of elected student body officers consisting of representatives from each degree program and at least one representative from each officially recognized club. In conjunction with the ASB advisor, the Executive Board is responsible for administering the ASB budget and coordinating student activities.

Student Clubs

There are a number of active student clubs on campus. Club membership is open to all current students and alumni. Please see the Student Affairs Office for an application if you are interested in starting a new club.

Examples of clubs that have been active in the past have included: Game Development Club, Friday Night Magic, Audio Producers and Engineers Club, and Comic Club.

Student Lounge

The student lounge features comfortable seating, tables, billiards, and other games and recreational equipment. It offers a microwave oven and vending machines stocked with hot and cold drinks and snack foods.

Student Handbook

The Student Handbook provides important information on institution policies, people, campus activity, student conduct and expectations.

LIBRARY

Cogswell Library connects the college to ideas and information through a variety of formats. In addition to over 10,000 print books and magazines, the library maintains a large DVD/CD collection and serves as the gateway to thousands of scholarly articles, digital journals and electronic books.

Computers with Internet access and updated software, wireless, scanner and photocopier are also available as well as knowledgeable librarian and staff to help the Cogswell community find the best resources.

http://www.cogswell.edu/current/library.php

ACADEMIC DEGREE PROGRAMS

Institutional Learning Outcomes (ILO)

ILO Number	Competency	Institutional Learning Outcome
ILO1	Written Communication	Cogswell graduates will be able to write correctly, accurately, and persuasively.
ILO2	Oral Communication	Cogswell graduates will be able to communicate professionally by connecting with their audience through effective oral presentations.
ILO3	Critical Thinking	Cogswell graduates will be able to critically analyze ideas, issues, content and events to formulate conclusions and make decisions individually or collaboratively.
ILO4	Information Literacy	Cogswell graduates will be able to identify, locate, evaluate, and responsibly use information from a range of sources.
ILO5	Quantitative Reasoning	Cogswell graduates will be able to apply quantitative methods to solve a variety of problems.
ILO6	Creative Thinking	Cogswell graduates will be able to combine and synthesize ideas, content and expertise in original and innovative ways.

UNDERGRADUATE PROGRAMS

Digital Arts and Animation (DAA)

Karen Keister
Director of Digital Arts and Animation

DAA Introduction

Digital Arts and Animation (DAA) offers students preparation in three concentration areas: 3D Animation, Entertainment Design, and 3D Modeling. The coursework bridges traditional and digital arts classes and includes solid components of theory, production, and general education. Digital Arts and Animation project classes provide many opportunities for collaborations with other programs at Cogswell, including Digital Audio Technology and Digital Arts Engineering. The Portfolio classes provide a format for bringing together all of the elements of the concept to delivery pipeline as students collaborate on multidisciplinary teams to complete real world projects.

DAA Program Learning Outcomes

Cogswell Graduates in Digital Arts and Animation (DAA) will:

- DAA PLO 1. Demonstrate effective application and combination of elements of design and color in student projects.
- DAA PLO 2. Employ creative aspects of experimentation and iteration in their designs.
- DAA PLO 3. Illustrate the ability to recognize and differentiate between critical components in projects.
- DAA PLO 4. Create expressive characters, environments and props using traditional tools and techniques of the industry.
- DAA PLO 5. Integrate inventive principles, techniques and skills in student projects.
- DAA PLO 6. Contribute effectively their expertise to a collaborative project.

DAA Concentrations

DAA 3D Animation Concentration

Description

The animation program encompasses character, non-character and experimental animation. Character animation fuses acting, performance and the principles of movement to create believable, genuine, emotive characters. Character design, story structure and strong animation fundamentals are used by students to create a short, animated film project in their senior year. Fundamentals and the development of the "craft" of animation are stressed. Students may produce animations fusing both traditional and computer techniques. Non-character animation focuses on visual effects, abstract animation or the motion of inanimate objects. Students are encouraged to combine media to produce original, creative work and content.

Curriculum

B.A. in Digital Arts and Animation 3D Animation Concentration		
Core Classes for 3D Animation		**39 credits**
Course Number	**Course Name**	**Credits**
DAA100	2D Design 1	3
DAA105	Color Theory	3
DAA106	Digital Imaging Concepts	3
DAA110	Sketching	3
DAA115	Figure Drawing 1	3
DAA212	Perspective and Rendering	3
DAA220	Video Editing	3
DAA230	Introduction to Sculpture	3
DAA240	Introduction to 3D Modeling	3
DAA264	Drawing Animation 1	3
DAA310	Storyboarding	3
DMM110 or **DMM125** **or** **DMM130** **or** **DMM270**	Beta Business from the Ground Up 1 or Cover your Assets or Digital Media Creativity or Project Management	3
SWE100	Introduction to Scripting: Python	3
Concentration Classes for 3D Animation		**33 credits**
DAA200	Acting	3
DAA244	Introduction to 3D Animation Principles	3
DAA265	2D Animation 1	3
DAA267	Character Rigging	3
DAA360	3D Animation 1	3
DAA364	Drawing Animation 2	3
DAA365	3D Animation 2	3
DAA460	2D Animation 2	3
DAA465	3D Animation 3	3
DAA480A or **DAA476**	Animation Portfolio 1 or Animated Film Production	3

or **DAA478**	or Star Thief Studio	
DAA485A or **DAA476** or **DAA479**	Animation Portfolio 2 or Animated Film Production or Star Thief Studio	3
Electives		**6 credits**
Elective	Advisor-approved elective	3
Elective or **INT401**	Advisor-approved elective or Internship 1	3
General Education Classes for non-engineering majors		**45 credits**
Total		**Total 123 Credits**

Degree Plan

B.A. Digital Arts & Animation
3D Animation Concentration
123 Credits

Class	*Title*	*Credits*	*Prerequisites*
**Remedial Classes*			
MATH003	Intermediate Algebra	****3***	***None***
ENG050	Grammar & Composition	****3***	***None***
First Term			
DAA100	2D Design 1	3	None
DAA110	Sketching	3	None
ENG100	Composition & Critical Thinking	3	Placement Exam or ENG050 Grammar & Composition
HUM120 (recommended)	Nature & History of Western Art	3	None
MATH115	Basic Topics in Math	3	Placement Exam or MATH003 Intermediate Algebra
Second Term			
DAA115	Figure Drawing 1	3	DAA110 Sketching
DAA105	Color Theory	3	DAA100 2D Design 1
DAA106	Digital Imaging Concepts	3	DAA100 2D Design 1
General Education Course	Please see Gen Ed		As Required
General Education Course	Please see Gen Ed		As Required
Third Term			
DAA230	Introduction to Sculpture	3	DAA115 Figure Drawing 1
DAA240	Introduction to 3D Modeling	3	DAA100 2D Design 1
DAA212	Perspective & Rendering	3	DAA110 Sketching
General Education Course	Please see Gen Ed		As Required

General Education Course	Please see Gen Ed	3	As Required
Fourth Term			
DAA244	Introduction to 3D Animation Principles	3	DAA240 Introduction to 3D Modeling
DAA264	Drawing Animation 1	3	DAA115 Figure Drawing 1
SWE100	Introduction to Scripting: Python	3	None
DMM110 **or** **DMM125** **or** **DMM130** **or** **DMM270**	Beta Business from the Ground Up 1 or Cover your Assets or Digital Media Creativity or Project Management	3	None
General Education Course	Please see Gen Ed		As Required

Class	Title	Credits	Prerequisites
Fifth Term			
DAA200	Acting	3	None
DAA265	2D Animation 1	3	DAA264 Drawing Animation 1
DAA267	Character Rigging	3	DAA240 Introduction to 3D Modeling
Elective	Advisor-approved elective	3	As Required
General Education Course	Please see Gen Ed		As Required
General Education Course	Please see Gen Ed		As Required
Sixth Term			
DAA220	Video Editing	3	DAA 100 2D Design 1
DAA310	Storyboarding	3	DAA115 Figure Drawing 1 & DAA212 Perspective & Rendering
DAA360	3D Animation 1	3	DAA244 Introduction to 3D Animation Principles & DAA267 Character Rigging
DAA364	Drawing Animation 2	3	DAA264 Drawing Animation 1
General Education Course	Please see Gen Ed		As Required
Seventh Term			
DAA365	3D Animation 2	3	DAA360 3D Animation 1 & DAA364 Drawing Animation 2
DAA460	2D Animation 2	3	DAA265 2D Animation 1
DAA480A **or** **DAA476** **or** **DAA478**	Animation Portfolio 1 or Animated Film Production or Star Thief Studio	3	Senior Status
General Education Course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Eighth Term			
DAA465	3D Animation 3	3	DAA365 3D Animation 2
DAA485A **or** **DAA476** **or** **DAA479**	Animation Portfolio 2 or Animated Film Production or Star Thief Studio	3	DAA480A Animation Portfolio 1
Elective **or** **INT401**	Advisor-approved Elective or Internship	3	As Required
General Education Course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required

General Education Requirements

45-48 Credits

Class	Applicable Courses	Credits	Prerequisites
*Remedial Classes			
ENG050	Grammar & Composition	***3**	None
MATH003	Intermediate Algebra	***3**	None
***Additional Math Class			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100
SOCIAL SCIENCES – 12 units in 3 areas			

HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

DAA Entertainment Design Concentration

Description

The Entertainment Design concentration integrates a strong traditional art background with skills in digital imagery. The course of study includes drawing, painting, illustration, character design, and concept art. It is designed for students interested in concept design, storyboarding, digital painting, and 3-D model texturing. Issues of presentation and delivery are addressed. The ability to transform verbal and written directions into visual representations of characters and scenes is emphasized.

Curriculum

B.A. in Digital Arts and Animation Entertainment Design Concentration		
Core Classes for Entertainment Design Concentration		**39 credits**
Course Number	**Course Name**	**Credits**
DAA100	2D Design1	3
DAA105	Color Theory	3
DAA106	Digital Imaging Concepts	3
DAA108 or **DAA109** or **DAA264**	Introduction to Photography or Web Design or Drawing Animation 1	3
DAA110	Sketching	3
DAA115	Figure Drawing 1	3
DAA212	Perspective and Rendering	3
DAA220	Video Editing	3
DAA230	Introduction to Sculpture	3
DAA240	Introduction to 3D Modeling	3
DAA310	Storyboarding	3
DMM110 or **DMM125** **or** **DMM130** **or** **DMM270**	Beta Business from the Ground Up 1 or Cover your Assets or Digital Media Creativity or Project Management	3
SWE100	Introduction to Scripting: Python	3
Concentration Classes for Entertainment Design		**33 credits**
DAA120	Traditional Painting	3
DAA210	Figure Drawing 2	3
DAA245	Texturing	3
DAA270	Illustration1	3
DAA320	Digital Painting	3
DAA335	Portrait Sculpture	3
DAA340	Modeling 1	3
DAA370	Concept Design	3
DAA470	Illustration 2	3

DAA480E or **DAA476** or **DAA478**	Entertainment Design Portfolio 1 or Animated Film Production or Star Thief Studio	3
DAA485E or **DAA476** or **DAA479**	Entertainment Design Portfolio 2 or Animated Film Production or Star Thief Studio	3
Electives		**6 credits**
Elective	Advisor-approved elective	3
Elective or **INT401**	Advisor-approved elective or Internship 1	3
General Education Classes for non-engineering majors		**45 credits**
		Total 123 credits

Degree Plan

B.A. Digital Art & Animation
Entertainment Design Concentration
123 Credits

Class	*Title*	*Credits*	*Prerequisites*
**Remedial Classes*			
MATH003	***Intermediate Algebra***	*****3***	***None***
ENG050	Grammar & Composition	*****3***	***None***
First Term			
DAA100	2D Design 1	3	None
DAA110	Sketching	3	None
ENG100	Composition & Critical Thinking	3	Placement Exam or ENG050 Grammar & Composition
HUM120(recommended)	The Nature and History of Western Art	3	None
MATH115	Basic Topics in Math	3	Placement Exam or MATH003 Intermediate Algebra
Second Term			
DAA105	Color Theory	3	DAA100 2D Design 1
DAA106	Digital Imaging Concepts	3	DAA100 2D Design 1
DAA115	Figure Drawing 1	3	DAA110 Sketching
General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Third Term			
DAA212	Perspective & Rendering	3	DAA110 Sketching
DAA230	Introduction to Sculpture	3	DAA115 Figure Drawing 1
DAA240	Introduction to 3D Modeling	3	DAA100 2D Design 1
General Education course	Please see Gen Ed		As Required

General Education course	Please see Gen Ed	3	As Required
Fourth Term			
DAA109 **Or** **DAA264** **or** **DAA108**	Web Design or Drawing Animation 1 or Introduction to Photography	3	DAA100 2D Design 1 Or DAA115 Figure Drawing 1 or DAA100 2D Design 1
DAA220	Video Editing	3	DAA 100 2D Design 1
DMM110 **or** **DMM125** **or** **DMM130** **or** **DMM270**	Beta Business from the Ground Up 1 or Cover Your Assets or Digital Media Creativity or Project Management	3	None
General Education course	Please see Gen Ed		As Required
SWE100	Introduction to Scripting: Python	3	None

Class	*Title*	*Credits*	*Prerequisites*
Fifth Term			
DAA120	Traditional Painting	3	DAA105 Color Theory & DAA110 Sketching
DAA210	Figure Drawing 2	3	DAA115 Figure Drawing 1
DAA270	Illustration 1	3	DAA105 Color Theory & DAA115 Figure Drawing 1
General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Sixth Term			
DAA245	Texturing	3	DAA240 Introduction to 3D Modeling
DAA310	Storyboarding	3	DAA115 Figure Drawing 1 & DAA212 Perspective & Rendering
DAA320	Digital Painting	3	DAA106 Digital Imaging Concepts
General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Seventh Term			
DAA470	Illustration 2	3	DAA270 Illustration 1
DAA480 E **or** **DAA476** **or** **DAA478**	Entertainment Design Portfolio 1 or Animated Film Production or Star Thief Studio	3	
Elective	Advisor-approved elective	3	As required
General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Eighth Term			
DAA335	Portrait Sculpture	3	DAA230 Introduction to Sculpture

DAA340	Modeling 1	3	DAA240 Introduction to 3D Modeling
DAA370	Concept Design	3	DAA115 Figure Drawing 1 & DAA212 Perspective & Rendering
DAA485 E **or** **DAA476** **or** **DAA479**	Entertainment Design Portfolio 2 or Animated Film Production or Star Thief Studio	3	DAA480 E Entertainment Design Portfolio 1
Elective **or** **INT401**	Advisor-approved Elective or Internship	3	As required
General Education course	Please see Gen Ed		As Required

General Education Requirements
45-48 Credits

Class	*Applicable Courses*	*Credits*	*Prerequisites*
**Remedial Classes*			
ENG050	Grammar & Composition	***3**	None
MATH003	Intermediate Algebra	***3**	None
****Additional Math Class*			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100

HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100
SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143

SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

DAA 3D Modeling Concentration

Description

The Modeling concentration develops both 2D and 3D skills in modeling. It allows the student to focus on strong conceptual visual skills, hands-on model building, digitizing, texture mapping, and other skills necessary for model data set creation. These models find applications in movies, commercials, simulators and emulators, games, animation sequences, product design, and product development.

Curriculum

B.A. in Digital Arts and Animation
3D Modeling Concentration

Core Classes for 3D Modeling		**39 credits**
Course Number	**Course Name**	**Credits**
DAA100	2D Design 1	3
DAA105	Color Theory	3
DAA106	Digital Imaging Concepts	3
DAA108 or **DAA109** or **DAA264**	Introduction to Photography or Web Design or Drawing Animation 1	3
DAA110	Sketching	3
DAA115	Figure Drawing 1	3
DAA212	Perspective and Rendering	3
DAA220	Video Editing	3
DAA230	Introduction to Sculpture	3
DAA240	Introduction to 3D Modeling	3
DAA310	Storyboarding	3

DMM110 or **DMM125** **or** **DMM130** **or** **DMM270**	Beta Business from the Ground Up 1 or Cover Your Assets or Digital Media Creativity or Project Management	3
SWE100	Introduction to Scripting: Python	3
Concentration Classes for 3D Modeling		**33 credits**
DAA120 or **DAA270**	Traditional Painting or Illustration 1	3
DAA245	Texturing	3
DAA248	Lighting and Layout	3
DAA267	Character Rigging	3
DAA330	Figure Sculpture	3
DAA340	Modeling 1	3
DAA345	Modeling 2	3
DAA370	Concept Design	3
DAA440	Modeling 3	3
DAA480M or **DAA476** or **DAA478**	Modeling Portfolio 1 or Animated Film Production or Star Thief Studio	3
DAA485M or **DAA476** or **DAA479**	Modeling Portfolio 2 or Animated Film Production or Star Thief Studio	3
Electives		**6 Credits**
Elective	Advisor-approved elective	3
Elective or **INT401**	Advisor-approved elective Or Internship 1	3
General Education Classes for non-engineering majors		**45 credits**
		Total 123 credits

Degree Plan

B.A. Digital Arts & Animation
3D Modeling Concentration
123 Credits

Class	*Title*	*Credits*	*Prerequisites*
**Remedial Classes*			
MATH003	***Intermediate Algebra***	*****3***	***None***
ENG050	Grammar & Composition	*****3***	***None***
First Term			

DAA100	2D Design 1	3	None
DAA110	Sketching	3	None
ENG100	Composition & Critical Thinking	3	Placement Exam or ENG050 Grammar & Composition
HUM120 (recommended)	Nature & History of Western Art	3	None
MATH115	Basic Topics in Math	3	Placement Exam or MATH003 Intermediate Algebra
Second Term			
DAA105	Color Theory	3	DAA100 2D Design 1
DAA106	Digital Imaging Concepts	3	DAA100 2D Design 1
DAA115	Figure Drawing 1	3	DAA110 Sketching
General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Third Term			
DAA212	Perspective & Rendering	3	DAA110 Sketching
DAA230	Introduction to Sculpture	3	DAA115 Figure Drawing 1
DAA240	Introduction to 3D Modeling	3	DAA100 2D Design 1
General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Fourth Term			
DAA109 **or** **DAA264** **or** **DAA108**	Web Design or Drawing Animation 1 or Introduction to Photography	3	DAA100 2D Design 1 or DAA115 Figure Drawing 1 or DAA100 2D Design 1
DAA220	Video Editing	3	DAA 100 2D Design 1
DAA245	Texturing	3	DAA240 Introduction to 3D Modeling
DMM110 **or** **DMM125** **or** **DMM130** **or** **DMM270**	Beta Business from the Ground Up 1 or Cover your Assets or Digital Media Creativity or Project Management	3	None
General Education course	Please see Gen Ed		As Required

Class	*Title*	*Credits*	*Prerequisites*
Fifth Term			
DAA120 **or** **DAA270**	Traditional Painting or Illustration 1	3	DAA105 Color Theory & DAA110 Sketching DAA 105 Color Theory & DAA115 Figure Drawing 1
DAA248	Lighting and Layout	3	DAA245 Texturing
DAA330	Figure Sculpture	3	DAA230 Introduction to Sculpture

General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
SWE100	Introduction to Scripting: Python	3	None
Sixth Term			
DAA310	Storyboarding	3	DAA115 Figure Drawing 1 & DAA212 Perspective & Rendering
DAA340	Modeling 1	3	DAA240 Introduction to 3D Modeling
DAA370	Concept Design	3	DAA115 Figure Drawing 1 and DAA212 Perspective & Rendering
General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Seventh Term			
DAA345	Modeling 2	3	DAA340 Modeling 1
DAA267	Character Rigging	3	DAA240 Introduction to 3D Modeling
DAA480 M **or** **DAA476** **or** **DAA478**	Modeling Portfolio 1 or Animated Film Production or Star Thief Studio	3	
General Education course	Please see Gen Ed		As Required
General Education course	Please see Gen Ed		As Required
Eighth Term			
DAA440	Modeling 3	3	DAA345 Modeling 2
DAA485 M **or** **DAA476** **or** **DAA479**	Modeling Portfolio 2 or Animated Film Production or Star Thief Studio	3	DAA480 M Modeling Portfolio 1
Elective	Advisor-approved elective	3	As Required
Elective **or** **INT401**	Advisor-approved elective or Internship	3	As Required
General Education course			As Required

General Education Requirements
45-48 Credits

Class	*Applicable Courses*	*Credits*	*Prerequisites*
**Remedial Classes*			
ENG050	Grammar & Composition	***3**	None
MATH003	Intermediate Algebra	***3**	None
****Additional Math Class*			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003

BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100
SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100

SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

Digital Audio Technology (DAT)

Dr. Tim Duncan
Director of Digital Audio Technology

DAT Introduction

The Digital Audio Technology (DAT) program offers students who seek professional careers in the audio industry the opportunity to focus on audio production or audio software development. The DAT program features an integrated curriculum that includes music theory and composition (for Audio & Music Production majors), studio production, sound synthesis, soundtrack production, audio mastering and audio software development (for Audio Software Development & Engineering majors). DAT students learn a wide range of skills and concepts fundamental to digital audio and engage extensively in project-based learning. All DAT students participate in a senior-level multidisciplinary collaborative project. Each concentration track culminates in a year-long senior portfolio or engineering project.

DAT Program Learning Outcomes

Cogswell Graduates in Digital Audio Technology (DAT) will:

- DAT PLO 1. Execute an audio production project from concept to delivery according to industry standards.
- DAT PLO 2. Apply best music production practices to individual or collaborative audio projects.
- DAT PLO 3. Represent within a STEM perspective the conceptual basis of the tools and processes used in audio production.
- DAT PLO 4. Model musical styles based on an integration of historical and theoretical knowledge.
- DAT PLO 5. Apply knowledge, reasoning and reflection to evaluate music and audio production.
- DAT PLO 6. Formulate the steps and processes toward a specific career path within the industry.

DAT Concentrations

DAT Audio & Music Production Concentration

Description

Central to the DAT program is audio and music production, which consists of desktop audio production, studio production, and soundtrack production/postproduction for motion pictures and videogames. The primary emphasis of this concentration is mastery of the concept-to-delivery pipeline for audio production: Students produce audio content-to-order for clients and collaborative projects, or original creative work to

market and distribute themselves. The senior-level portfolio classes provide a format for bringing together all of the elements of concept-to-delivery in a major collaborative or solo project. Cogswell College provides many opportunities for collaborative work and project-based learning for DAT students, particularly in the crafting of soundtracks for animations and videogames.

Curriculum

B.S. Digital Audio Technology Audio & Music Production Concentration		
DAT Core Requirements		
Course Number	***Course Title***	***Credits***
**Remedial Classes*		
DAT050	Music Fundamentals	*****3***
DAT Core Requirements – 24 credits		
DAT110	Desktop Production Fundamentals	3
DAT115	Desktop Audio Production	3
DAT210	Digital Sound Synthesis 1	3
DAT212	Interactive Audio Production	3
DAT220	Studio Production 1	3
DAT320	Studio Production 2	3
DAT335	Music Perception and Cognition	3
DAT483	DAT Collaborative Project	3
Audio & Music Production Requirements – 42 credits		
DAT102	Music Theory 1	3
DAT107	Music Theory 2	3
DAT120	Introduction to the Techniques of Digital Signal Processing	3
DAT150	Beginning Audio Programming	3
DAT202	Music Theory 3	3
DAT207 or **DA208**	Music Theory 4 Live Sound	3
DAT282	DAT Professional Practices Seminar	3
DAT303	Cultural Trends & Musical Style 1	3
DAT324 **DAT326 (Select 2)** **DAT420**	Studio Production 3 Digital Sound Design Audio Mastering	6
DAT338 or **DAT340**	Cultural Trends & Musical Style 2 Film Scoring	3
DAT342 or **DAT355**	Interactive Game Composition Audio for Video Games	3
DAT480 or **DAT482**	Portfolio 1 Game Studio 1	3
DAT485 or	Portfolio 2	

DAT488	Game Studio 2	3
DAT Electives – 9 credits		
Elective	Lower Division Elective	3
Elective	Upper Division Elective	3
Elective	Upper Division Elective	3
GE Requirements – 45 credits		
Total		120

Degree Plan

B.S. in Digital Audio Technology (DAT)
Audio & Music Production Degree Plan
120 Credits

Class	*Title*	*Credits*	*Prerequisites*
**Remedial Classes*			
MATH003	Intermediate Algebra	****3***	***None***
ENG050	Grammar & Composition	****3***	***None***
DAT050	Music Fundamentals	****3***	***None***
First Term			
DAT102	Music Theory 1	3	Placement Examination or DAT050 Music Fundamentals
DAT110	Desktop Production Fundamentals	3	None
ENG100	English Composition	3	Placement Test or ENG050 Grammar & Composition
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Second Term			
DAT107	Music Theory 2	3	DAT102 Music Theory 1
DAT115	Desktop Audio Production	3	DAT110 Desktop Production Fundamentals
General Education Course	Please see Gen Ed.		As Required
MATH115	Basic Topics in Math	3	Placement Examination or MATH003
General Education Course	Please see Gen Ed.		As Required
Third Term			
DAT202	Music Theory 3	3	DAT107 Music Theory 2
DAT210	Digital Sound Synthesis 1	3	DAT115 Desktop Audio Production
DAT220	Studio Production 1	3	DAT115 Desktop Audio Production
General Education Course	Please see Gen Ed.		As Required

SCI100	Basic Concepts of Physics	3	MATH115 Basic Topics in Math
Fourth Term			
DAT150	Beginning Audio Programming	3	DAT115 Desktop Audio Production
DAT207 or **DAT208**	Music Theory 4 or Live Sound	3	DAT202 Music Theory 3 or DAT115 Desktop Audio Production
DAT212	Interactive Audio Production	3	DAT210 Digital Sound Synthesis 1
DATxxx	Lower Division DAT Elective	3	DAT115 Desktop Audio Production
DAT320	Studio Production 2	3	DAT220 Studio Production 1

Class	*Title*	*Credits*	*Prerequisites*
Fifth Term			
DAT303	Cultural Trends & Music Style 1	3	DAT202 Music Theory 3
SCI220	Foundations of Musical Acoustics	3	SCI100 Basic Concepts of Physics
Select two: DAT324, DAT326, DAT420	Studio Production 3, Digital Sound Design, or Audio Mastering	6	DAT320 Studio Production 2
DAT120	Introduction to the Techniques of Digital Signal Processing	3	MATH115 Basic Topics in Math
Sixth Term			
DAT282	DAT Professional Practices Seminar	3	DAT220 Studio Production 1
DAT338 or **DAT340**	Cultural Trends & Musical Style 2 or Film Scoring	3	DAT202 Music Theory 3 DAT202 and DAT320 Studio Production 2
DAT342 or **DAT355**	Interactive Game Composition or Audio for Video Games	3	(DAT324 Studio Production 3 or DAT326 Digital Sound Design) and DAT202 Music Theory 3 DAT324 Studio Production 3 or DAT326 Digital Sound Design
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Seventh Term			
DAT335	Music Perception and Cognition	3	SCI220 Foundations of Musical Acoustics
DAT480 or **DAT482**	Portfolio 1 or Game Studio 1	3	DAT324 Studio Production 3 or DAT326 Digital Sound Design DAT342 Interactive Game Composition or DAT355 Audio for Video Games
DATxxx	Upper Division DAT Elective	3	DAT320 Studio Production 2
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Eighth Term			
DAT485 or **DAT488**	Portfolio 2 or Game Studio 2	3	DAT480 Portfolio 1 or DAT482 Game Studio 1
General Education Course	Please see Gen Ed.		As Required
DAT483	DAT Collaborative Project	3	DAT320 Studio Production 2
DATxxx	Upper Division DAT Elective	3	DAT320 Studio Production 2
General Education Course	Please see Gen Ed.		As Required

General Education Requirements
45-48 Credits

Class	Applicable Courses	Credits	Prerequisites
*Remedial Classes			
ENG050	Grammar & Composition	***3**	None
MATH003	Intermediate Algebra	***3**	None
***Additional Math Class			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100
SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100

HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

Description

For students with a strong foundation in math and science, DAT offers a program of study that integrates audio technology and software engineering in preparation for careers in the manufacturing side of the audio industry. The program combines study of calculus, engineering physics, software engineering and digital signal processing in conjunction with digital audio content production. Throughout the program there are many opportunities for project-based learning and focused application of digital audio and engineering concepts. In the senior audio engineering project classes students synthesize all of the components of their study into the design and implementation of an audio application, plugin or app, or a game audio programming collaborative project.

Curriculum

B.S. Digital Audio Technology		
Software Development & Engineering Concentration		
DAT Core Requirements		
Course Number	***Course Title***	***Credits***
DAT050	Music Fundamentals	***3*
DAT Core Requirements – 24 credits		
DAT110	Desktop Production Fundamentals	3
DAT115	Desktop Audio Production	3
DAT210	Digital Sound Synthesis 1	3
DAT212	Interactive Audio Production	3
DAT220	Studio Production 1	3
DAT320	Studio Production 2	3
DAT335	Music Perception and Cognition	3
DAT483	DAT Collaborative Project	3
Audio Software Development & Engineering Requirements – 19 credits		
DAT350	Audio Programming	3
DAT360	Digital Signal Processing	3
DAT365	Digital Filter Design	4
DAT450 **or** **DAT455**	Audio Software Development Game Audio Programming	3
DAT481	Audio Engineering Project 1	3
DAT487	Audio Engineering Project 2	3
Electives – 9 credits		
Elective	Elective	3
Elective	Upper Division Elective	3
Elective	Upper division Elective	3
Additional Engineering Math Requirements – 9 credits		
MATH144	Calculus 2	3
MATH245	Calculus 3	3

MATH310	Engineering Math 1: Discrete Math	3
Software Engineering Requirements – 22 credits		
SWE100	Introduction to Scripting: Python	3
SWE110	C Programming	4
SWE212	Java Programming	4
SWE310	Data Structures and Algorithms	4
SWE315	C++ Programming: Object Oriented Programming	4
SWE340	Software Engineering Project 1	3
GE Requirements with Engineering Math & Science – 47 credits		
Total		***130***

Degree Plan

B.S. in Digital Audio Technology (DAT)
Audio Software Development & Engineering Degree Plan
130 Credits

Class	*Title*	*Credits*	*Prerequisites*
**Remedial Classes*			
MATH003	Intermediate Algebra	***3**	***None***
ENG050	Grammar & Composition	***3**	***None***
***Additional Class*			
MATH116	Pre-Calculus	****4**	Placement Exam or MATH003
First Term			
DAT110	Desktop Production Fundamentals	3	None
ENG100	English Composition & Critical Thinking	3	Placement Exam or ENG050 Grammar & Composition
General Education Course	Please see Gen Ed.		As Required
MATH143	Calculus I	4	MATH116 Pre-Calculus or Placement Test
SWE100	Introduction to Scripting: Python	3	None
Second Term			
DAT115	Desktop Audio Production	3	DAT110 Desktop Production Fundamentals
General Education Course	Please see Gen Ed.		As Required
MATH144	Calculus 2	3	MATH143 Calculus 1
SCI145	College Physics 1	4	MATH143 Calculus 1
SWE110	C Programming	4	MATH115 Basic Topics in Math or MATH116 Pre-Calculus
Third Term			
DAT210	Sound Synthesis 1	3	DAT115 Desktop Audio Production
DAT220	Studio Production 1	3	DAT115 Desktop Audio Production

SWE212	Java Programming	4	SWE110 C Programming
MATH245	Calculus 3	3	MATH144 Calculus 2
SWE310	Data Structures and Algorithms	4	SWE110 C Programming & SWE315 C++ Programming
Fourth Term			
DAT212	Interactive Audio Production	3	DAT210 Sound Synthesis 1
MATH310	Discrete Mathematics	3	MATH144 Calculus 2
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
SWE315	C++ Programming (Object Oriented Programming)	4	SWE100 Introduction to Scripting: Python or SWE110 C Programming or SWE212 Java Programming

Class	Title	Credits	Prerequisites
Fifth Term			
DAT320	Studio Production 2	3	DAT220 Studio Production 1
General Education Course	Please see Gen Ed.		As Required
DAT360	Digital Signal Processing	3	SWE310 Data Structures and Algorithms
SCI220	Foundations of Musical Acoustics	3	SCI100 Basic Concepts of Physics (SCI145 for Engineering students)
SWE340	Software Engineering Methods and Project 1	3	SWE315 C++ Programming (Object Oriented Programming)
Sixth Term			
DAT350	Audio Programming	3	SWE310 Data Structures and Algorithms
DAT365	Digital Filter Design	4	DAT360 Digital Signal Processing
DAT335	Music Perception and Cognition	3	SCI220 Foundations of Musical Acoustics
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Seventh Term			
DAT450 or **DAT455**	Audio Software Development or Game Audio Programming	3	DAT360 Digital Filter Design
DAT481	Audio Engineering Project 1	3	DAT350 Audio Programming
Elective	Any STEM course	3	As Required
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Eighth Term			
DAT487	Audio Engineering Project 2	3	DAT481 Audio Engineering I
DAT483	DAT Collaborative Project	3	DAT320 Studio Production 2
General Education Course	Please see Gen Ed.		As Required
Elective	Any STEM course	3	As Required
General Education Course	Please see Gen Ed.		As Required
Elective	Any STEM course	3	As Required

General Education Requirements
45-48 Credits

Class	Applicable Courses	Credits	Prerequisites
**Remedial Classes*			
ENG050	Grammar & Composition	***3**	None
MATH003	Intermediate Algebra	***3**	None
****Additional Math Class*			

MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100
SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100

SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

Digital Media Management (DMM)

Philip Johnson
Interim Director of Digital Media Management

DMM Introduction

Digital Media Management is the degree program that combines entrepreneurial thought, customer discovery, project management and business practices within the expanding marketplace of digital media. Cogswell College is located in the heart of Silicon Valley, the capital of innovation and the headquarters of some of the leading companies occupying the digital media space.

This degree gives students the specific skill sets needed to enter and thrive in some of the most competitive career fields in business - film management, publishing management, video game production management and other media management areas.

DMM Program Learning Outcomes

Cogswell Graduates in Digital Media Management (DMM) will:

- DMM PLO 1. Design an iterative business model.
- DMM PLO 2. Develop a management plan to leverage existing resources.
- DMM PLO 3. Formulate decisions and implement plans of action based on analysis of data.
- DMM PLO 4. Construct a portfolio displaying integration of digital media and systems.
- DMM PLO 5. Create effective oral presentation and written documents for the purpose of persuasion.
- DMM PLO 6. Demonstrate an effective leadership role in a team project.

Curriculum

B.A. in Digital Media Management
120 Credits

Core Classes for Digital Media Management		51 credits
Course Number	**Course Name**	**Credits**
DMM110	Beta Business From The Ground Up 1	3

DMM120	Communicating For Success	3
DMM125	Cover Your Assets	3
DMM130	Digital Media Creativity	3
DMM141	Digital Media Marketing	3
DMM150	Digital Media Forecasting	3
DMM210	Beta Business From The Ground Up 2	3
DMM230	Business Development and Negotiation	3
DMM241	Consumer and Market Behavior	3
DMM250	Financial Models and Management 1	3
DMM260	Team-Building & Collaboration	3
DMM270	Project Management	3
DMM340	Social Media, Engagement and Analytics	3
DMM365	Ethics, Development and Responsibility Management	3
DMM430	Digital Media Design Lab	3
DMM440	Digital Media Storytelling	3
DMM450	Digital Media Operations	3
Project Courses **Select two semesters of the same project**		**6 credits**
DAT482	Game Studio 1 (for audio)	3
DAT488	Game Studio 2 (for audio)	3
DAT483	DAT Collaborative Project	3
DAT483	DAT Collaborative Project	3
DAA476	Animated Film Production	3
DAA476	Animated Film Production	3
DAA478	Star Thief Studio	3
DAA479	Star Thief Studio	3
GAM475	Game Studio 1	3
GAM476	Game Studio 2	3
Electives		
SELECT 18 CREDITS OR 6 COURSES FROM THE FOLLOWING OPTIONS (ANY ADVISOR APPROVED COURSE)		**18 credits**
DAA	Any Digital Art & Animation courses	
DAT	Any Digital Audio Technology courses	
DMM	Any Digital Media Management courses	
GDA/GDE	Any Game Design Art/Game Design Engineering courses	
INT	Internship (Up to 2 courses total)	
SWE	Any Software Engineering courses	
General Education Classes for Non-Engineering Majors		**45 credits**
Total		**120**

Degree Plan

B.A. Digital Media Management (DMM)
Digital Media Management Degree Plan

120 Credits

Class	*Title*	*Credits*	*Prerequisites*
**Remedial Classes*			
MATH003	Intermediate Algebra	****3***	***None***
ENG050	Grammar & Composition	****3***	***None***
First Term			
Elective	Any Advisor approved course	3	As required
DMM110	Beta Business From The Ground Up 1	3	None
DMM120	Communicating For Success	3	None
MATH115	Basic Topics in Math	3	Placement Exam or MATH003
ENG100	Composition & Critical Thinking	3	Placement Exam or ENG050 Grammar
Second Term			
Elective	Any Advisor approved course	3	As required
DMM125	Cover Your Assets	3	None
DMM130	Digital Media Creativity	3	None
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Third Term			
Elective	Any Advisor approved course	3	As required
DMM141	Digital Media Marketing	3	None
DMM150	Digital Media Forecasting	3	MATH115
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Fourth Term			
Elective	Any Advisor approved course	3	As required
Elective	Any Advisor approved course	3	As required
DMM210	Beta Business From The Ground Up 2	3	DMM110
DMM230	Business Development & Negotiation	3	DMM 110 or DMM 120
General Education Course	Please see Gen Ed.		As Required

Class	Title	Credits	Prerequisites
Fifth Term			
Elective	Any Advisor approved course	3	As required
DMM241	Consumer and Market Behavior	3	MATH115 and DMM141
DMM270	Project Management	3	None
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Sixth Term			
DMM250	Financial Models and Management 1	3	MATH 115 and DMM 110
DMM260	Team-Building & Collaboration	3	DMM 110
DMM340	Social Media, Engagement and Analytics	3	DMM 110 or DMM 141
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Seventh Term			
DMM365	Ethics, Development and Responsibility Management	3	DMM260 or DMM270
DAA476 **or** **DAA478** **or** **DAT482** **or** **DAT483** **or** **GAM475**	Animated Film Production Or Star Thief Or Game Studio 1 Or DAT Collaborative Project Or Game Studio 1	3 3 3 3 3	Entrance by portfolio None Advisor approval required Advisor approval required Advisor approval required
DMM430	Digital Media Design Lab	3	DMM230 or DMM260 or DMM270
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required
Eighth Term			
DAA476 **or** **DAA479** **or** **DAT488** **or** **DAT483** **or** **GAM476**	Animated Film Production Or Star Thief Studio Or Game Studio 2 Or DAT Collaborative Project Or Game Studio 2	3 3 3 3 3	Entrance by portfolio Advisor approval required Advisor approval required Advisor approval required Advisor approval required
DMM440	Digital Media Storytelling	3	ENG100, DMM120 and DMM141
DMM450	Digital Media Operations	3	DMM110
General Education Course	Please see Gen Ed.		As Required
General Education Course	Please see Gen Ed.		As Required

General Education Requirements

45-48 Credits

Class	Applicable Courses	Credits	Prerequisites
*Remedial Classes			
ENG050	Grammar & Composition	***3**	None
MATH003	Intermediate Algebra	***3**	None
***Additional Math Class			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100
SOCIAL SCIENCES – 12 units in 3 areas			

HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

Engineering (ENGR)

Dr. Zachi Baharav
Director of Engineering,
Executive Director, Cogswell Idea
& Innovation Lab

ENGR Introduction

The engineering programs in Cogswell combine the practicality and concrete attention required in engineering, with the abstract nature of art expressed in animation, game, and audio. Students thrive in a project-based setting, working on multidisciplinary teams with artists and designers. Being comfortable and familiar with the digital-art aspect of the development is crucial in the industry, and by working on school-wide projects, the students are exposed to this experience. The students create their portfolio through these projects, and can choose to focus on subjects ranging from applications on mobile devices, to database/cloud interactions, and of course games programming and animations scripting. Students can choose concentrations in either Software Development (SWE), Web-and-Mobile, or Digital Arts Engineering (DAE).

ENGR Program Learning Outcomes

Cogswell Graduates in Engineering –Software Engineering and Digital Arts Engineering (SWE/DAE) will:

- ENGR PLO 1. Demonstrate the integration of professional responsibilities in the context of engineering solutions.
- ENGR PLO 2. Solve engineering problems or create art productions using knowledge of mathematics, science, and engineering.
- ENGR PLO 3. Analyze engineering problems and resolve them using appropriate design steps and processes.
- ENGR PLO 4. Demonstrate effective collaboration in a multidisciplinary team project.
- ENGR PLO 5. Communicate effectively throughout engineering project stages.
- ENGR PLO 6. Demonstrate the ability to independently acquire and apply new knowledge.

ENGR Concentrations

Digital Arts Engineering (DAE) Concentration

Description

DAE combines a necessary balance between software and digital arts. Produces graduates who are capable of working at the intersection of engineering and art. Graduates will have skills in programming languages, tools programming, scripting languages, and software development; concept design, modeling, texturing, rigging, and animation; and computer simulation, visualization and game engine programming.

Curriculum

B.S. in Digital Arts Engineering

Engineering Core – 25 credits

Course Number	Course Name	Credits
SWE100	Introduction to Scripting: Python	(Python – unify across school) 3
SWE110	C Programming	(C) 4
SWE212	Java Programming	(Java) 4
SWE221	Linux Programming Environment	(Linux) 3
SWE315	C++ Programming: Object Oriented Programming	(C++) 4
SWE310	Data Structures and Algorithms	(Data Structures) 4
SWE449	Tools Programming	(Plugins programming) 3
Math and Science Core for Software Engineering - 12 credits		
MATH144	Calculus 2	(Integrals, Diff Eqns) 3
MATH245	Calculus 3	(Coord. systems, Vectors, Surfaces, Differential oper) 3
MATH310	Discrete Math	(Sets, Counting, statistics) 3
MATH320	Geometry and Transformation	(Geometry in 3D space, Linear Algebra) 3
Digital Arts Core – 33 credits		
DAA100	2D Design 1	(Photoshop + traditional) 3
DAA110	Sketching	(pencil and paper) 3
DAA105	Color Theory	(paint + photoshop) 3
DAA240	Introduction to 3D Modeling	(Maya modeling) 3
DAA244	Introduction to 3D Animation Principles	(Maya animation) 3
DAA245	Texturing	(Maya shaders) 3
DAA248	Lighting and Layout 1	(Maya Cinematography) 3
DAA267	Character Rigging	(Maya) 3
DAA356	Production Pipeline	(Putting it all together) 3
DAA358	Dynamics	(Smoke, dust, explosions, waterfalls) 3
DAA400	Compositing & Special Effects	(CG and Live action elements) 3
Electives– 9 Credits		
Elective	Any advisor approved course.	3
Elective	Any advisor approved course.	3
Elective	Any advisor approved course.	3
Internship and/or School internal projects can be used here with advisor's approval.		
General Education, Math and Science – 47 credits (Common to all Cogswell Engineering)		
	Included in GE-core for engineering	

MATH143	Calculus 1	(Basic Calculus) 4
SCI145	College Physics 1	(Basic physics, mechanics) 4
	(Another physics/biology class as needed to fulfill GE requirements)	
Total		**126**

Degree Plan

B.S. Digital Arts Engineering
126 Credits

Course	*Title*	*Credits*	*Prerequisites*
**Remedial Course*			
MATH003	Intermediate Algebra	*****3***	***None***
ENG050	Grammar & Composition	*****3***	***None***
****Additional Math Course*			
MATH116	Pre-Calculus	******4***	MATH003 or Math Placement Exam
First Term			
SWE100	Introduction to Scripting: Python	3	None
MATH143	Calculus 1	4	Placement Test or MATH116 Pre-Calculus
DAA100	2D Design 1	3	None
DAA110	Sketching	3	None
ENG100	Composition & Critical Thinking	3	Placement Test or ENG050 Grammar & Composition
Second Term			
SWE110	C Programming	***3***	MATH115 or MATH116
SCI145	College Physics 1	3	MATH143 Calculus 1
MATH144	Calculus 2	3	MATH143 Calculus 1
DAA240	Introduction to 3D Modeling	3	DAA100 2D Design 1
General Education Course	Please see GenEd		As Required
Third Term			
SWE212	Java Programming	4	SWE110 C Programming
SWE310	Data Structures and Algorithms	4	SWE110 or SWE315
MATH245	Calculus 3	3	MATH144 Calculus 2
DAA105	Color Theory	3	DAA100 2D Design 1
ENG220	Technical Writing	3	ENG100
Fourth Term			
DAA244	Introduction to 3D Animation Principles	3	DAA240 Introduction to 3D Modeling
DAA245	Texturing	3	DAA240 Introduction to 3D Modeling
SWE315	C++ Programming: Object Oriented Programming	3	SWE100 or SWE110 or SWE212

MATH310	Discrete Mathematics	3	MATH144 Calculus 2
ENG250	Speech and Oral Communication	3	As Required

Course	*Title*	*Credits*	*Prerequisites*
Fifth Term			
SWE221	Linux Programming Environment	3	SWE110 C Programming
DAA248	Lighting and Layout 1	3	DAA245 Texturing
DAA267	Character Rigging	3	DAA240 Introduction to 3D Modeling
MATH320	Geometry & Transformation	3	MATH144 Calculus 2
General Education Course	Please see GenEd		As Required
Sixth Term			
DAA356	Production Pipeline	3	DAA240 Introduction to 3D Modeling and SWE100 Introduction to Scripting: Python
DAA400	Compositing and Special Effects	3	DAA248 Lighting and Layout 1 or DAA270 Illustration 1
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Seventh Term			
SWE449	Tools Programming	3	SWE315 C++ Programming: Object Oriented Programming
DAA358	Dynamics	3	DAA244 Introduction to 3D Animation Principles and SWE100 Introduction to Scripting: Python
INT401 Internship 1 or an Elective	Internship 1 or any advisor approved course.	3	As required
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Eighth Term			
INT401 Internship 1 or an Elective	Internship 1 or any advisor approved course.	3	As required
Elective course of your choice.	Any Engineering course of your choice in any program OR DMM270 Project Management.	3	As required
General Education Course	Please see GenEd Recommended: HUN400 Capstone.		As Required
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required

Cogswell Polytechnical College

General Education Requirements
45-48 Credits

Class	*Applicable Courses*	*Credits*	*Prerequisites*
**Remedial Classes*			
ENG050	Grammar & Composition	*****3***	None
MATH003	Intermediate Algebra	*****3***	None
****Additional Math Class*			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100

SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

Web and Mobile concentration

Description

Mobile devices and Web browsers are the main tools for consuming information and entertainment today. Moreover, large part of our interaction with friends happens through these channels, be it social networks, sharing photos and videos, and so on. This concentration teaches the basics of software engineering, while focusing on the applications to these new mediums. Right from the first year students are introduced to these programming paradigms, and are able to use these in their projects throughout their studies.

Curriculum

B.S. in Software Engineering: Web and Mobile concentration

Engineering Core – 46 credits

Course Number	Course Name		Credits
SWE100	Introduction to Scripting: Python	(Python – unify across school)	3
SWE110	C Programming	(C)	4
SWE212	Java Programming	(Java)	4
SWE221	Linux Programming Environments	(Linux)	3
DMM270	Project management		3
SWE310	Data Structures and Algorithms	(Data Structures)	4
SWE315	C++ Programming	(C++)	4
SWE320	Operating Systems Concepts	(Linux, windows, iOS, Android)	3
SWE351	Computer Architecture	(CPU, GPU, ALU, I/O)	3
SWE352	Embedded Software Systems	(Microcontrollers)	3
SWE340	Software Engineering Methods & Projects 1	(Software development life cycle)	3
SWE445	Advanced C++ Programming	(Advanced topics, can be substituted w/ Advanced Java)	3
SWE484	Senior Project 1: Planning		3
SWE485	Senior Project 2: Execution		3
Math and Science Core for Software Engineering - 12 credits			
MATH144	Calculus 2	(Integrals, Diff Eqns)	3
MATH245	Calculus 3	(Coord. systems, Vectors, Surfaces, Differential oper)	3
MATH310	Discrete Mathematics	(Sets, Counting, statistics)	3
MATH320	Geometry and Transformation	(Geometry in 3D space, Linear Algebra)	3
Concentration – 15 credits			
SWE125	Introduction to Mobile Programming: iOS		3
SWE375	Mobile Programming	(Android)	3
SWE475	Mobile Programming Graphics	(Open GL , +)	3
SWE115	Web Programming: HTML5	(HTML5, JS, CSS)	3
SWE120	Flash Programming: ActionsScript	(ActionScript)	3
Electives –6 Engineering credits (2 courses)			
Elective	Any advisor approved course.		3
Elective	Any advisor approved course.		3
Internship and/or School internal projects can be used here with advisor's approval.			
General Education, Math and Science – 48 credits (Common to all Cogswell Engineering)			
	Included in GE-core for engineering		

MATH143	Calculus 1	(Basic Calculus) 4
SCI145	College Physics 1	(Basic physics, mechanics) 4
SCI245	College Physics 2	(Electro., circuits, optics) 4
Total		**127**

Degree Plan

B.S. Software Engineering: Web and Mobile Concentration
127 Credits

Course	*Title*	*Credits*	*Prerequisites*
**Remedial Course*			
MATH003	Intermediate Algebra	***3**	***None***
ENG050	Grammar & Composition	***3**	***None***
****Additional Math Course*			
MATH116	Pre-Calculus	****4***	MATH003 Intermediate Algebra or Math Placement Exam
First Term			
SWE100	Introduction to Scripting: Python	3	None
SWE115	Web Programming: HTML5	3	None
MATH143	Calculus 1	4	MATH116 Pre-Calculus
ENG100	Composition & Critical Thinking	3	ENG050 Grammar & Composition or ENG Placement Exam
General Education Course	Please see GenEd		As Required
Second Term			
SWE110	C Programming	***3***	MATH115 or MATH116
SWE125	Introduction to Mobile Programming: iOS	3	None
SCI145	College Physics 1	3	MATH143 Calculus 1
MATH144	Calculus 2	3	MATH143 Calculus 1
General Education Course	Please see GenEd		As Required
Third Term			
SWE120	Flash Programming: ActionScript	***3***	None
SWE212	Java Programming	4	SWE110 C Programming
SWE310	Data Structures and Algorithms	4	SWE110 or SWE315
MATH245	Calculus 3	3	MATH144 Calculus 2
ENG220	Technical Writing	3	ENG100
Fourth Term			
SWE221	Linux Programming Environment	3	SWE110 C Programming
SWE315	C++ Programming: Object Oriented Programming	3	SWE100 or SWE110 or SWE212
MATH310	Discrete Mathematics	3	MATH144 Calculus 2
ENG250	Speech and Oral Communication	3	As Required
General Education Course	Please see GenEd		As Required

Course	Title	Credits	Prerequisites
Fifth Term			
SWE351	Computer Architecture	3	SWE310 Data Structures and Algorithms
SWE352	Embedded Software Systems	3	SWE110 C Programming and MATH143 Calculus 1
SCI245	College Physics 2	4	SCI145 College Physics 1
MATH320	Geometry & Transformation	3	MATH144 Calculus 2
General Education Course	Please see GenEd		As Required
Sixth Term			
SWE445	Advanced C++ Programming	3	SWE315 C++ Programming: Object Oriented Programming
SWE340	Software Engineering Methods and Project 1	3	SWE315 C++ Programming: Object Oriented Programming
SWE375	Mobile Programming	3	SWE212 Java Programming or SWE315 C++ Object Oriented Programming
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Seventh Term			
SWE475	Mobile Programming Graphics	3	SWE375 Mobile Programming
SWE484	Senior Project 1: Planning	3	Senior Level
INT401 Internship 1 or an Elective	Internship 1 or any advisor approved course.	3	As required
DMM270	Project Management	3	None
General Education Course	Please see GenEd		As Required
Eighth Term			
SWE320	Operating Systems Concepts	3	SWE221 Linux programming environment and SWE310 Data Structures and Algorithms
SWE485	Senior Project 2: Execution	3	SWE484 Senior Project 1: Planning
INT401 Internship 1 or an Elective	Internship 1 or any advisor approved course.	3	As required
General Education Course	Please see GenEd Recommended: HUN400 Capstone.		As Required
General Education Course	Please see GenEd		As Required

Cogswell Polytechnical College

General Education Requirements
45-48 Credits

Class	*Applicable Courses*	*Credits*	*Prerequisites*
**Remedial Classes*			
ENG050	Grammar & Composition	*****3***	None
MATH003	Intermediate Algebra	*****3***	None
****Additional Math Class*			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100

SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

Software Development Concentration (SWE)

Description

SWE offers an education covering the basics of Computer-Science, together with the engineering aspects relating to software development. Graduates will have the skills and experience to both undertake large-scale programming projects, as well hands-on small-scale projects, as part of a larger team. In addition, graduates will be familiar with some of the tools used in Digital arts and in Game programming.

Curriculum

B.S. in Software Engineering: Software Development concentration

Engineering Core – 46 credits

Course Number	Course Name	Credits
DMM270	Project Management	3
SWE100	Introduction to Scripting: Python	(Python – unify across school) 3
SWE110	C Programming	(C) 4
SWE212	Java Programming	(Java) 4
SWE221	Linux Programming Environments	(Linux) 3
SWE310	Data Structures and Algorithms	(Data Structures) 4
SWE315	C++ Programming: Object Orientated Programming	(C++) 4
SWE320	Operating Systems Concepts	(Linux, windows, iOS, Android) 3
SWE351	Computer Architecture	(CPU, GPU, ALU, I/O) 3
SWE352	Embedded Software Systems	(Microcontrollers) 3
SWE340	Software Engineering Methods & Projects 1	(Software development life cycle) 3
SWE445	Advanced C++ Programming	(Advanced topics, can be substituted w/ Advanced Java) 3
SWE484	Senior Project 1: Planning	3
SWE485	Senior Project 2: Execution	3
Math and Science Core for Software Engineering – 12 credits		
MATH144	Calculus 2	(Integrals, Diff Eqns) 3
MATH245	Calculus 3	(Coord. systems, Vectors, Surfaces, Differential oper) 3
MATH310	Discrete Math	(Sets, Counting, statistics) 3
MATH320	Geometry and Transformation	(Geometry in 3D space, Linear Algebra) 3
Concentration – 9 credits		
SWE442	Software Engineering Methods & Projects 2	(Case studies, Modular design, templates) 3
SWE115	Web Programming: HTML5	(HTML5, JS, CSS) 3
SWE125	Introduction to Mobile Programming: iOS	3
Electives – 12 Engineering credits (4 courses)		
Elective	Any advisor approved course.	3
Elective	Any advisor approved course.	3
Elective	Any advisor approved course.	3
Elective	Any advisor approved course.	3
Internship and/or School internal projects can be used here with advisor's approval.		
General Education, Math and Science – 48 credits (Common to all Cogswell Engineering)		
	Included in GE-core for engineering	
MATH143	Calculus 1	(Basic Calculus) 4

SCI145	College Physics 1	(Basic physics, mechanics) 4
SCI245	College Physics 2	(Electro., circuits, optics) 4
Total		**127**

Degree Plan

B.S. Software Engineering: Software Development concentration
127 Credits

Course	*Title*	*Credits*	*Prerequisites*
**Remedial Course*			
MATH003	Intermediate Algebra	*****3***	***None***
ENG050	Grammar & Composition	*****3***	***None***
****Additional Math Course*			
MATH116	Pre-Calculus	******4***	MATH003 Intermediate Algebra or Math Placement Exam
First Term			
SWE100	Introduction to Scripting: Python	3	None
SWE115	Web Programming: HTML5	3	None
MATH143	Calculus 1	4	MATH116 Pre-Calculus
ENG100	Composition & Critical Thinking	3	ENG050 Grammar & Composition or ENG Placement Exam
General Education Course	Please see GenEd		As Required
Second Term			
SWE110	C Programming	***3***	MATH115 or MATH116
SWE125	Introduction to Mobile Programming: iOS	3	None
SCI145	College Physics 1	3	MATH143 Calculus 1
MATH144	Calculus 2	3	MATH143 Calculus 1
General Education Course	Please see GenEd		As Required
Third Term			
SWE212	Java Programming	4	SWE110 C Programming
SWE310	Data Structures and Algorithms	4	SWE110 or SWE315
MATH245	Calculus 3	3	MATH143 Calculus 1
Elective	Any advisor approved course.	3	As required
ENG220	Technical Writing	3	ENG100
Fourth Term			
SWE221	Linux Programming Environment	3	SWE110 C Programming
SWE315	C++ Programming: Object Oriented Programming	3	SWE100 or SWE110 or SWE212
MATH310	Discrete Mathematics	3	MATH144 Calculus 2
ENG250	Speech and Oral Communication	3	As Required
General Education Course	Please see GenEd		As Required

Course	Title	Credits	Prerequisites
Fifth Term			
SWE351	Computer Architecture	3	SWE310 Data Structures and Algorithms
SWE352	Embedded Software Systems	3	SWE110 C Programming and MATH143 Calculus 1
SCI245	College Physics 2	4	SCI145 College Physics 1
MATH320	Geometry & Transformation	3	MATH144 Calculus 2
General Education Course	Please see GenEd		As Required
Sixth Term			
SWE445	Advanced C++ Programming	3	SWE315 C++ Programming: Object Oriented Programming
SWE340	Software Engineering Methods and Project 1	3	SWE315 C++ Programming: Object Oriented Programming
Elective	Any advisor approved course.	3	As required
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Seventh Term			
SWE442	Software Engineering Methods and Project 2	3	SWE340 Software Engineering Methods and Project 1
SWE484	Senior Project 1: Planning	3	Senior Level
INT401 Internship 1 or an Elective	Internship 1 or any advisor approved course.	3	As required
DMM270	Project Management	3	None
General Education Course	Please see GenEd		As Required
Eighth Term			
SWE320	Operating Systems Concepts	3	SWE221 Linux programming environment and SWE310 Data Structures and Algorithms
SWE485	Senior Project 2: Execution	3	SWE484 Senior Project 1: Planning
INT401 Internship 1 or an Elective	Internship 1 or any advisor approved course.	3	As required
General Education Course	Please see GenEd Recommended: HUN400 Capstone.		As Required
General Education Course	Please see GenEd		As Required

Cogswell Polytechnical College

General Education Requirements
45-48 Credits

Class	*Applicable Courses*	*Credits*	*Prerequisites*
**Remedial Classes*			
ENG050	Grammar & Composition	*****3***	None
MATH003	Intermediate Algebra	*****3***	None
****Additional Math Class*			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100

SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

Game Design and Development (GDD)

Jerome Solomon
Dean of the College, Director of
Game Design & Development

GDD Introduction

Game Design & Development is the degree program at Cogswell that best exemplifies the intersection of engineering and art for games and various forms of interactive technology. As the market for computer games and gamification demands visually high detail, fun, interactive, compelling stories, & dynamic game play, there is a need for highly skilled people with specialized expertise.

Game Design & Development consists of two majors which represent the two sides of game development teams. Game Design Art is focused on art and content creation. Game Design Engineering is focused on engineering and the more technical aspects of game creation.

GDD Program Learning Outcomes

Cogswell Graduates in Game Design and Development – Art and Engineering (GDD) will:

- GDD PLO 1. Construct project plans integrating principles of project planning and game theory, incorporating concepts, techniques, and scheduling.
- GDD PLO 2. Apply technology, software and engineering concepts to the interpretation and analysis of data.
- GDD PLO 3. Demonstrate creation of a project through collaboration with a multi-disciplinary project team.
- GDD PLO 4. Author game content for multiple platforms using 2 and 3-dimensional asset techniques and principles.
- GDD PLO 5. Create an online portfolio that demonstrates principles, techniques and skills applicable in the industry.
- GDD PLO 6. Demonstrate application of the elements of design and color through drawing and rendering techniques.

GDD Majors

GDA Game Design Art Major

Description

Game Design Art students will graduate with expertise in the creative side of game design including but not limited to 2D art, 3D art, level design, storytelling, and team oriented project creation for multiple platforms. GDA classes provide many opportunities for collaborations with other programs at Cogswell, including Digital Audio Technology and Game Design Engineering. The Portfolio classes provide a format for bringing together all of the elements of the concept to delivery pipeline as students collaborate on multidisciplinary teams to complete real world projects. Students learn to work on teams that mirror real development teams that consist of artists, engineers, audio, and management.

Curriculum

B.A. in Game Design Art (GDA) 120 Credits		
Game Design Art Concentration		
Core Classes		
Class	Course Name	Credits
DAA100	2D Design 1	3
DAA110	Sketching	3
DAA106	Digital Imaging Concepts	3
DAA340	Modeling 1	3
GAM225	Introduction to Game Production	3
DMM110 or DMM125 or DMM130 or DMM270	Beta Business From The Ground Up 1 or Cover Your Assets or Digital Media Creativity or Project Management	3
GAM235	Game Usability	3
DAA245	Texturing	3
GAM350	Game Design 1	3
GAM376	Game Design 2	3
DAA267	Character Rigging	3
GAM355	Level Design 1	3
GAM415	Level Design 2	3
GAM475	Game Studio 1	3
GAM476	Game Studio 2	3
Concentration Classes		
DAA115	Figure Drawing 1	3
DAA212	Perspective & Rendering	3
DAA105	Color Theory	3
DAA240	Introduction to 3D Modeling	3
DAA120 or DAA320	Traditional Painting or Digital Painting	3
SWE100	Introduction to Scripting: Python	3
GAM370	Environment Art	3
DAA244	Introduction to 3D Animation Principles	3

Elective Classes		
GAM360 Game Animation or INT401 Internship 1 or Elective	Game Animation or Internship 1 or Any Advisor approved course	3
INT402 Internship 2 or Elective	Internship 2 or Any Advisor approved course	3

45 Credits of General Education (Non-Engineering General Education)

Degree Plan

B.A. Game Design Art
120 Credits

Course	*Title*	*Credits*	*Prerequisites*
**Remedial Courses*			
MATH003	Intermediate Algebra	*****3***	***None***
ENG050	Grammar & Composition	*****3***	***None***
First Term			
DAA100	2D Design 1	3	None
DAA110	Sketching	3	None
MATH115	Basic Topics in Math		Placement Test or MATH003 Intermediate Algebra
ENG100	Composition & Critical Thinking		Placement Test or ENG050 Grammar & Composition
Second Term			
DAA106	Digital Imaging Concepts	3	DAA100 2D Design 1
DAA115	Figure Drawing 1	3	DAA110 Sketching
DAA212	Perspective & Rendering	3	DAA110 Sketching
DAA105	Color Theory	3	DAA100 2D Design 1
General Education Course	Please see GenEd		As Required
Third Term			
DAA240	Introduction to 3D Modeling	3	DAA100 2D Design 1
DAA120 or DAA320	Traditional Painting or Digital Painting	3	DAA110 Sketching and DAA105 Color Theory or DAA106 Digital Imaging Concepts
SWE100	Introduction to Scripting: Python	3	None
General Education Course	Please see GenEd		As Required

General Education Course	Please see GenEd		As Required
Fourth Term			
DAA340	Modeling 1	3	DAA240 Introduction to 3D Modeling
GAM225	Introduction to Game Production	3	None
DMM110 or **DMM125** or **DMM130 or DMM270**	Beta Business From The Ground Up 1 or Cover Your Assets or Digital Media Creativity or Project Management	3	None
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required

Course	Title	Credits	Prerequisites
Fifth Term			
GAM235	Game Usability	3	GAM225 Introduction to Game Production
GAM370	Environment Art	3	DAA340 Modeling 1
DAA245	Texturing	3	DAA240 Introduction to 3D Modeling
GAM350	Game Design 1	3	ENG100 Composition & Critical Thinking
General Education Course	Please see GenEd		As Required
Sixth Term			
DAA244	Introduction to 3D Animation Principles	3	DAA240 Introduction to 3D Modeling
DAA267	Character Rigging	3	DAA240 Introduction to 3D Modeling
GAM355	Level Design 1	3	DAA240 Introduction to 3D Modeling & SWE100 Introduction to Programming, Python
GAM376	Game Design 2	3	GAM350 Game Design 1
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Seventh Term			
GAM415	Level Design 2	3	GAM355 Game Level Design 1
GAM475	Game Studio 1	3	Junior status required.
GAM360 Game Animation **or** **INT401 Internship 1** **or** **Elective**	Game Animation or Internship 1 or Any Advisor approved course	3	As required
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Eighth Term			
GAM476	Game Studio 2	3	Junior status required.
INT402 Internship 2 **or** **Elective**	Internship 2 or Any Advisor approved course	3	As required
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required

Cogswell Polytechnical College

General Education Requirements
45-48 Credits

Class	*Applicable Courses*	*Credits*	*Prerequisites*
**Remedial Classes*			
ENG050	Grammar & Composition	*****3***	None
MATH003	Intermediate Algebra	*****3***	None
****Additional Math Class*			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100

SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

GDE Game Design Engineering Major

Description

Game Design Engineering students will graduate with expertise in game design, game programming languages, tools programming, scripting languages and software development on the engineering side. These skills are essential in the computer gaming, simulation, visualization and game engine programming industries. Since the industry also places high importance on teamwork, Cogswell's coursework offers numerous opportunities to participate in multi-disciplinary team projects. Students learn to work on teams that mirror real development teams that consist of artists, engineers, audio, and management.

Curriculum

B.S. in Game Design Engineering (GDE) 130 Credits		
Game Design Engineering Concentration		
Core Classes		
Class	Course Name	Credits
DAA100	2D Design 1	3
DAA110	Sketching	3
DAA106	Digital Imaging Concepts	3
DAA240	Introduction to 3D Modeling	3
GAM225	Introduction to Game Production	3
DAA267	Character Rigging	3
GAM235	Game Usability	3
DMM110 or DMM125 or DMM130 or DMM270	Beta Business From The Ground Up 1 or Cover Your Assets or Digital Media Creativity or Project Management	3
DAA245	Texturing	3
GAM350	Game Design 1	3
GAM376	Game Design 2	3
GAM355	Level Design 1	3
GAM415	Level Design 2	3
GAM475	Game Studio 1	3
GAM476	Game Studio 2	3
Concentration Classes		
SWE100	Introduction to Scripting: Python	3
SWE115	Web Programming: HTML5	3
MATH144	Calculus 2	3
MATH310	Discrete Mathematics	3
SWE315	C++ Programming: Object Oriented Programming	4
MATH320	Geometry & Transformation	3
SWE445	Advanced C++ Programming	3
SWE310	Data Structures and Algorithms	4
SWE375	Mobile Programming	3

SWE447	GUI and Graphics Programming	3
SWE449	Tools Programming	3
Elective Classes		
INT401 Internship 1 or Elective	Internship 1 or Any Advisor approved course	3
47 Credits of Engineering General Education		

Degree Plan

B.S. Game Design Engineering
130 Credits

Course	*Title*	*Credits*	*Prerequisites*
**Remedial Courses*			
MATH003	Intermediate Algebra	*****3***	***None***
ENG050	Grammar & Composition	*****3***	***None***
****Additional Math Courses*			
MATH116	Pre-Calculus	******4***	Placement Test or MATH003
First Term			
SWE100	Introduction to Scripting: Python	3	None
DAA100	2D Design 1	3	None
DAA110	Sketching	3	None
MATH143	Calculus 1	4	Placement Test or MATH116 Pre-Calculus
ENG100	Composition & Critical Thinking		Placement Test or ENG050 Grammar & Composition
Second Term			
DAA106	Digital Imaging Concepts	***3***	DAA100 2D Design 1
SWE115	Web Programming: HTML5	***3***	None
SCI145	College Physics 1	4	MATH143 Calculus 1
MATH144	Calculus 2	3	MATH143 Calculus 1
General Education Course	Please see GenEd		As Required
Third Term			
DAA240	Introduction to 3D Modeling	3	DAA100 2D Design 1
GAM225	Introduction to Game Production	3	None
MATH310	Discrete Mathematics	3	MATH144 Calculus 2
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Fourth Term			

DAA267	Character Rigging	3	DAA240 Introduction to 3D Modeling
GAM235	Game Usability	3	GAM225 Introduction to Game Production
SWE315	C++ Programming: Object Oriented Programming	4	SWE100 Introduction to Programming: Python or SWE110 C Programming or SWE212 Java Programming
DMM110 or DMM125 or DMM130 or DMM270	Beta Business From The Ground Up 1 or Cover Your Assets or Digital Media Creativity or Project Management	3	None
MATH320	Geometry & Transformation	3	MATH144 Calculus 2
General Education Course	Please see GenEd		As Required

Course	*Title*	*Credits*	*Prerequisites*
Fifth Term			
SWE445	Advanced C++ Programming	3	SWE315 C++ Programming: Object Oriented Programming
DAA245	Texturing	3	DAA240 Introduction to 3D Modeling
GAM350	Game Design 1	3	ENG100 Composition & Critical Thinking
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Sixth Term			
SWE310	Data Structures and Algorithms	4	SWE110 C Programming or SWE315 C++ Object Oriented Programming
SWE375	Mobile Programming	3	SWE212 Java Programming or SWE315 C++ Object Oriented Programming
GAM355	Level Design 1	3	DAA240 Introduction to 3D Modeling and SWE100 Introduction to Scripting: Python
GAM376	Game Design 2	3	GAM350 Game Design 1
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Seventh Term			
GAM415	Level Design 2	3	GAM355 Game Level Design 1
GAM475	Game Studio 1	3	Junior status required.
SWE447	GUI and Graphics Programming	3	SWE315 C++ Programming
General Education Course	Please see GenEd		As Required
General Education Course	Please see GenEd		As Required
Eighth Term			
GAM476	Game Studio 2	3	Junior status required.
INT401 Internship 1	Internship 1	3	As required

or **Elective**	or Any Advisor approved course		
SWE449	Tools Programming	3	SWE315 C++ Programming: Object Oriented Programming
General Education Course	Please see GenEd		As Required

General Education Requirements
45-48 Credits

Class	*Applicable Courses*	*Credits*	*Prerequisites*
**Remedial Classes*			
ENG050	Grammar & Composition	***3**	None
MATH003	Intermediate Algebra	***3**	None
****Additional Math Class*			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			

ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100
SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status

SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

General Education

Richard Schimpf
Chair of English & Humanities

Nirmal Singh
Chair of Math & Sciences

General Education Introduction

The mission of the General Education Program at Cogswell College is to give students the basic knowledge of key subjects as a foundation for further learning, the written and oral communication skills necessary to function in a professional environment, the experience to find and evaluate sources of required information, the critical thinking skills to make reasoned judgments, the ethical awareness to make principled decisions as responsible members of a global society**,** and the inspiration to continue exploring new areas of interest for the rest of their lives.

General Education Program Learning Outcomes

A core curriculum of courses in the humanities, English, mathematics, science, and the social sciences prepares graduates who can:

1. Formulate correct and persuasive written papers based on appropriate research, critical analysis, and logical conclusions.
2. Make articulate oral presentations based on appropriate research, critical analysis, and logical conclusions.
3. Apply and analyze quantitative methods and techniques to solve numerical problems.
4. Use scientific principles and reasoning to answer questions about the natural world and to distinguish science from non-science.
5. Identify, frame and analyze the processes by which human beings develop social, historical and artistic perspectives, and communicate the results in writing and orally.
6. Articulate in essays and presentations how values and ethics inform human understanding, structure and behavior/conduct.
7. Demonstrate in written assignments the connection between contemporary social, political and economic topics and their origins and analyze their effects on our globalized world.

General Education Curriculum

General Education Requirements
45-48 Credits

Class	*Applicable Courses*	*Credits*	*Prerequisites*
**Remedial Classes*			

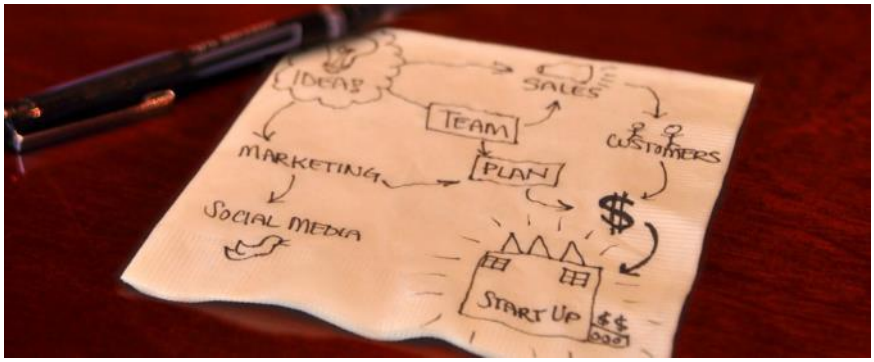
ENG050	Grammar & Composition	***3**	None
MATH003	Intermediate Algebra	***3**	None
****Additional Math Class*			
MATH116	Pre-Calculus	**4	Placement Exam or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking	3	Placement Exam o ENG050
ORAL COMMUNICATION – 3 credits			
ENG235	The Art of Argumentation	3	ENG280
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG280
CRITICAL THINKING – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG250	Speech and Oral Communication	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art	3	None
HUM122	World Music	3	None
HUM125	Music in Western Culture	3	None
HUM130	Modern Art History	3	None
HUM140	Modern Art History and Film	3	None
HUM222	Music in the Recorded Age	3	ENG100
HUM227	Film History	3	ENG100
HUM228	Video Games and Society	3	ENG100
HUM230	History of Animation	3	ENG100
LETTERS – 3 credits			
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG220	Technical Writing	3	ENG100
ENG227	Scriptwriting	3	ENG100
ENG228	Creative Writing	3	ENG100
ENG230	Classics of the World Stage	3	ENG100
ENG235	The Art of Argumentation	3	ENG100
ENG280	Apocalypse & The American Imagination	3	ENG100
ENG300	Essentials of Written Communication	3	ENG100
ENG310	Classics of Western Drama	3	ENG100
SOCIAL SCIENCES – 12 units in 3 areas			
HUMAN BEHAVIOR – 3 credits			
ENG280	Apocalypse & The American Imagination	3	ENG100
HUM228	Video Games & Society	3	ENG100
SSC180	Introduction to Psychology	3	ENG100
COMPARATIVE SYSTEMS – 3 credits			

HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
SSC332	Global Political Economics	3	ENG100
SOCIAL ISSUES – 3 credits			
HUM200	History of the Modern World	3	ENG100
SSC200	U.S. Government	3	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits			
MATH115	Basic Topics in Mathematics	3	Placement Exam or MATH003
MATH116	Pre-Calculus	4	Placement Exam or MATH003
MATH143	Calculus 1	4	MATH116
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits			
SCI100	Science of Motion: Humans, Animals, Objectives	3	MATH115
SCI110	Basic Concepts in Physics	3	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	3	MATH115
SCI145	College Physics 1	4	MATH143
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI130
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas			
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits			
MATH143	Calculus 1	4	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits			
SCI145	College Physics 1 (Required for engineering)	4	MATH143
SCI245	College Physics 2 (Required for SWE)	4	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	3	SCI100
SCI200	General Science: Principles and Trends	3	SCI100 or SCI110 or SCI 130
UPPER-DIVISION GENERAL EDUCATION – 6 credits			
300-LEVEL GE ELECTIVE – 3 credits			
HUM361	Contemporary Ethical Issues	3	Junior Status
SSC332	Global Political Economics	3	Junior Status
ENG310	Classics of Western Drama	3	Junior Status
ENG300	Essentials of Written Communication	3	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits			
HUM400	Research & Writing Capstone Project	3	Senior status

GRADUATE PROGRAMS

ENTREPRENEURSHIP & INNOVATION (MA ENT)

Dr. Zachi Baharav
Director of Master of Arts in Entrepreneurship & Innovation



MA ENT Introduction

The Master of Arts in Entrepreneurship & Innovation (MA ENT) provides graduate students an opportunity to learn start-up business lessons, techniques and tools. The eight courses of this degree program cover the basic skills required of an entrepreneur to create, build and grow a successful venture; a two-semester hands-on practicum is the capstone of the program. Courses are taught by practicing entrepreneurs, allowing students to benefit from instructors' practical experience in addition to the academic content. The program is hands-on and project-based, using the students' own entrepreneurial ventures as the springboard for learning.

MA ENT Program Learning Outcomes

Cogswell Graduates in MA in Entrepreneurship and Innovation (MA ENT) will:

- ENT PLO 1. Communicate effectively and compellingly to achieve business goals.
- ENT PLO 2. Apply management and leadership best practices in an entrepreneurial setting.
- ENT PLO 3. Solve business problems in an innovative manner.
- ENT PLO 4. Develop entrepreneurial marketing plans and financial models.
- ENT PLO 5. Create a business model and/or growth plan for a new venture.

MA ENT Degree

Curriculum

M.A. in Entrepreneurship & Innovation Core Classes		
Course Number	**Course Name**	**Credits**

ENT520	Business Models & Planning	3
ENT525	Legal Structures, Contracts & Risk Management	3
ENT530	Finance & Accounting	3
ENT535	Entrepreneurial Marketing	3
ENT540	Sales & Negotiations	3
ENT545	Creativity & Innovation	3
ENT550	Social Media & Online Marketing	3
ENT555	Leadership & Management	3
ENT590	Practicum 1	3
ENT595	Practicum 2	3
Total		30
Additional Classes (Optional)		
ENT598	Special Project	3
ENT599	Special Topic	3

COURSE DESCRIPTIONS

Course Numbering Taxonomy

Courses are designated with a number by which indicates the level of the course:

- 000-099 Developmental/remedial coursework
- 100-299 Lower-division courses primarily for freshman and sophomores.
- 300-499 Upper-division courses primarily for juniors and seniors.
- 500-or higher Graduate Courses

Undergraduate Course Descriptions

DAA100 2D DESIGN 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

An introduction to the principles of two-dimensional image making with an emphasis on visual communication. Traditional and digital production techniques are covered. Students will learn about the form and function of graphic design various principles of perception and Gestalt theory, and how they relate to graphic design. The course also serves as an introduction to image editing software. **Prerequisite**: None, **Co-requisite**: None

DAA105 COLOR THEORY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to color theory. Subtractive color principles are addressed through exercises using traditional pigments. Additive color principles are addresses through exercises using computers and image editing software. **Prerequisite**: DAA100, **Co-requisite**: None

DAA106 DIGITAL IMAGING CONCEPTS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Explores advanced image processing using the computer. Additive color principles are introduced through exercises using computers and image editing software. Coursework includes image creation, compositing, manipulation, creating backgrounds, textures, patterns, tiling, texture mapping and matte paintings using image-editing software. Students practice graphics principles by applying them to the web, CG, and other art forms. **Prerequisite**: DAA100, **Co-requisite**: DAA 105

DAA108 INTRODUCTION TO PHOTOGRAPHY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

An introduction to traditional photographic image making with the addition of a digital perspective. Students learn the technical issues of photography and learn to control the photographic medium. Studio lighting techniques and working ambient situational lighting is explored. Students examine various photographic approaches and philosophies to explore how photographic imagery can be used for personal artistic perception. **Prerequisite**: DAA100, **Co-requisite**: None

DAA109 WEB DESIGN

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduces World Wide Web concepts, visual and technical web site design, information management and delivery. Topics include: buliding content for the web, HTML, preparation of graphics for the web, Cascading Style Sheets (CSS), information architecture, interface design and web development tools. Students practice basic principles of interactivity by learning how to create, publish, and maintain a multipage interactive website. **Prerequisite**: DAA100, **Co-requisite**: None

DAA110 SKETCHING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to the fundamentals of drawing. Perceptual skills and the use of line, shade, perspective, ad composition. Students learn and practice these skills by working independently three hours per week. May be repeated once for credit with recommendation from the Instructor. **Prerequisite**: None, **Co-requisite**: None

DAA115 FIGURE DRAWING 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Life drawing from unclothed models. Students study proportion, volumes, light and shade, simple anatomy of the human form, and develop a basic understanding of the figure in motion. Students learn and practice these skills by working independently three hours per week. **Prerequisite**: DAA110, **Co-requisite**: None

DAA120 TRADITIONAL PAINTING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

The course in painting emphasizes perception development through specific painting exercises to develop an orderly approach and disciplined perception. Students learn about painting materials and their specific uses, and increase their understanding of color theory. May be repeated once for credit with recommendation from the instructor. **Prerequisite**: DAA105 AND DAA110, **Co-requisite**: DAA 105

DAA200 ACTING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Basic concepts of acting for stage and screen. Students explore the actor's relationship to other players as well as to the camera. Aspects of performance as they relate to different modes of production are investigated, including acting for the effects-heavy production and non-linear media. **Prerequisite**: None, **Co-requisite**: None

DAA210 FIGURE DRAWING 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

A continuation of Figure Drawing 1. Life Drawing from unclothed models. Study of proportion, volumes, light and shade, and simple anatomy of the human form. May be repeated once for credit with recommendation from the instructor. **Prerequisite**: DAA115, **Co-requisite**: None

DAA212 PERSPECTIVE AND RENDERING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

In-depth study of perspective and the application of light and dark values to geometric forms to convey a sense of form. Students learn to create core shadows and shadow projections to achieve believable grounding in space and they examine the color of shadow and light. Rapid visualization techniques are used to create the desired shape and material finish. **Prerequisite**: DAA110, **Co-requisite**: None

DAA220 VIDEO EDITING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours

3	15	60	**75**

Basic concepts of digital video editing, theory and techniques of motion picture editing, post-production methods, media file management, sound editing, titling, and effects. Students are introduced to graphic matching, rhythmic editing, coverage, continuity, and montage editing. Uses video editing software. **Prerequisite**: DAA100, **Co-requisite**: None

DAA230 INTRODUCTION TO SCULPTURE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Explores three-dimensional form. Emphasizes concept development, expression, spatial concepts, and comprehension of 3D space. Students learn techniques and tools used to create 3D artworks. Students work in traditional clay media. **Prerequisite**: DAA115, **Co-requisite**: None

DAA240 INTRODUCTION TO 3D MODELING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Creation of 3D organic and industrial models using one or more software modeling packages. Topics include modeling construction using polygon and/or spline-based techniques, texture mapping, lighting, shading, and rendering. Students apply these techniques to the creation of 3D models. **Prerequisite**: DAA100, **Co-requisite**: DAA 230

DAA244 INTRODUCTION TO 3D ANIMATION PRINCIPLES

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Principles of 3D animation using the latest 3D software applications. Topics include using the user interface, basics of motion, and basic kinematic set-up. Student will learn how to create and manage files in a production pipeline environment. **Prerequisite**: DAA240, **Co-requisite**: None

DAA245 TEXTURING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This course involves the use of layering color maps on digital surfaces to create specific material shaders. Texture map painting in 2 D is covered extensively. Analysis through physical observation on the light gathering of surfaces teaches students how to digitally reproduce any material. Students learn UV texture layout and projection techniques for shader creation. Procedural versus painted

shader maps are explored along with complex layering. Emphasis is spent on specular, diffuse, color, bump, displacement and normal mapping to achieve the desired result. **Prerequisite**: DAA240, **Co-requisite**: None

DAA248 LIGHTING AND LAYOUT 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Storytelling and mood are emphasized by the use of light on digital scenes. Six point lighting techniques are demonstrated in cinematic terms through their digital equivalents. Color, mood, and time of day are expressed through lighting and scene composition. Blocking is utilized to set the actors and sets to convey the desired intent. Camera knowledge, lens choice and exposure are applied to shot composition. Various rendering styles and engines will be used. **Prerequisite**: DAA245, **Co-requisite**: None

DAA250 DIGITAL SCULPTING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Students will utilize fast and simple modeling techniques for creating meshes without UVs. Students will design in 3D quickly as possible to aid in concept design. Students will cover various lighting, texturing and painting techniques. Discussion of UV unwrapping and retopologizing the models built with Dynamesh and Shadowbox for production will also be covered. **Prerequisite**: DAA240, **Co-requisite**: None

DAA264 DRAWING ANIMATION 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduces the principles of animation drawing: gesture, simplified geometric construction for anatomy, technique to capture movement and weight. Students develop the graphic language to maximize expression and movement for animation and learn methods for using line to convey overlap, form, torque/compression, and the line of action. **Prerequisite**: DAA115, **Co-requisite**: DAA 212

DAA265 2D ANIMATION 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to the basic principles of traditional, hand-drawn animation: squash and stretch, anticipation, secondary action, staging, easing in and out, arcs, timing, exaggeration, solid drawing and character appeal. The study of motion to understand mass, movement through space, and reaction to external forces. Concepts of keys, in-betweens and breakdowns, along with methods for recording drawings for playback, pegging, and using exposure sheets to record/adjust timing. The process for creating moving and sequential imagery from a bouncing ball thru a basic walk cycle. Students produce an animated scene that demonstrates mastery of principles. **Prerequisite**: DAA264, **Co-requisite**: None

DAA267 CHARACTER RIGGING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to animation software modules with emphasis on character rigging techniques: joints, surface binding, articulation, forward and inverse kinematics (FK and IK), and hierarchical node structures. Students apply these techniques to develop 3D characters. Includes a summary of the animation software module, graph editor, setting key frames, and tangents for basic animation. **Prerequisite**: DAA240, **Co-requisite**: None

DAA270 ILLUSTRATION 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This course is designed to present the student with the fundamentals of traditional illustration for professional application. Primarily, traditional painting media are used. The course will cover illustration theory but will emphasize studio practice and skill development. **Prerequisite**: DAA105 AND DAA115, **Co-requisite**: None

DAA299ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Course on a special topic in Digital Art and Animation. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

DAA310 STORYBOARDING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This class focuses on principles of Storytelling in a visual medium and concentrates on film or editorial boards used to pre-visualize animation or live action film. Topics include scale and camera angle, camera movement, character staging, composition and basic editing processes. Students pitch their ides in class and get feedback on projects that include dialogue and action sequences from selected scripts as well as building animatics and story reels. **Prerequisite**: DAA115 AND DAA212, **Co-requisite**: None

DAA312 ANIMAL DRAWING AND MOTION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This class takes the basics of core animation and illustration courses and applies them to the practice of drawing animals through zoo trip and in class lesson and projects. Topics include emphasis on gesture, constructive drawing and proportion of selected animal as well as stride and motion patterns. Students will complete 10 to 30 second traditional animation final or illustrated book involving their chosen animal. **Prerequisite**: DAA264, **Co-requisite**: None

DAA320 DIGITAL PAINTING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

The course in painting emphasizes perception development through specific digital painting exercises to develop an orderly approach. Students learn about painting textures for shaders and fully realized scenes. Students increase their understanding of color theory through visual development and matte painting. May be repeated once for credit with recommendation of the Instructor. **Prerequisite**: DAA106, **Co-requisite**: None

DAA321 QUADRUPED ANIMATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

An introduction to animating four legged creatures. Basic approach to animating a quadruped animal will be studied in a simplified step by step format. Students will study anatomy and locomotion of quadrupeds, and learn to apply animation principles in achieving different Gaits on a quadruped animal. Animal behavior will be studied, and students will learn to pair behavior patterns with locomotion. Students will also learn to animate transitions between Gaits. Feature & Game animations will be routinely examined to study style and aesthetics. **Prerequisite**: DAA267 AND DAA360, **Co-requisite**: None

DAA325 ADVANCED CHARACTER RIGGING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours

3	15	60	**75**

Advanced class in animation software modules with emphasis on character rigging techniques: joints, surface binding, articulation, forward and inverse kinematics (FK and IK), and hierarchical node structures. Students apply these techniques to develop 3D characters. Includes a summary of the animation software module, graph editor, setting key frames, and tangents for basic animation.• **Prerequisite**: DAA267, **Co-requisite**: None

DAA330 FIGURE SCULPTURE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This course is designed to develop the student's understanding of the gestural, constructive and anatomical structures of the figure- applying the knowledge to unique character and figural sculpture in traditional sculpting mediums. May be repeated once with recommendation from the instructor.• Students will demonstrate advanced skills in classical clay modeling techniques by building clay figures. **Prerequisite**: DAA230, **Co-requisite**: None

DAA335 PORTRAIT SCULPTURE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Explores portrait sculpture for character development. Emotive qualities of human expression using plastine. Students focus on the anatomy of the head and neck as critical to the development of emotionally convincing characters. **Prerequisite**: DAA230, **Co-requisite**: None

DAA340 MODELING 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduces hard and organic surface modeling pertaining to control and refinement of form. Reproduction of machine made forms and detailed organic shapes. Advanced texturing for enhancement of models. Students apply these techniques to develop 3D models. **Prerequisite**: DAA240, **Co-requisite**: None

DAA345 MODELING 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Explores the modeling of man-made forms for sets and props in cinematic work and interactive applications such as games. Includes transferring maquettes and other analog representations to digital form while maintaining fidelity in the reproduction of artwork and real objects. Texturing and lighting, reproduction of logotypes and molded textures. Students practice parameterization for animation and digital transfer. **Prerequisite**: DAA340, **Co-requisite**: DAA 480 M

DAA356 PRODUCTION PIPELINE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Workflow for efficient production in a multi-person environment. Distributed computing for high-throughput rendering. File and asset management and environment control. Scripting and programing for pipeline implementation and customization. User interfaces, reporting, notification tools for a render farm. **Prerequisite**: DAA240 AND SWE100, **Co-requisite**: None

DAA358 DYNAMICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to particle systems, sprites, soft and rigid bodies. Dynamic techniques for hair, cloth and fluids. Dynamics for games. Students will create professional grade particle simulation effects for CG production and game. **Prerequisite**: DAA244 AND SWE100, **Co-requisite**: None

DAA360 3D ANIMATION 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to the principles of animation as applied to 3D computer graphics. Uses provided 3D models to focus on the principles of motion: physics, easing weight, timing, and blocking using the animation software module. Serves as the base for students interested in studying character/creature animation.Covers a bouncing ball,physical animation of tops, prinicples of jump, flour sack, pantomime, basic posing fundamentals and walk cycles. **Prerequisite**: DAA244 AND DAA267, **Co-requisite**: None

DAA364 DRAWING ANIMATION 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

A continuation of Drawing Animation 1. Further life studies of human figures and animals emphasizing anatomical simplification, clarity, and motion. Introduction to facial construction and

expression. Students learn to incorporate layout, perspective, and backgrounds into character drawing. **Prerequisite**: DAA264, **Co-requisite**: None

DAA365 3D ANIMATION 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Continuation of 3D Animation 1. Explores the creation of character walks, acting and posing using the animation software module. Introduction to character development, scene blocking, and animating using dialogue tracks, and quadruped walks. Uses provided 3D models for pantomime animation, staging, silhouette, performance, weight and overlap exercises that emphasize character. **Prerequisite**: DAA360 AND DAA364, **Co-requisite**: DAA 480 A

DAA370 CONCEPT DESIGN

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This course focuses on development and design practices used by concept designers. Students apply professional marker and/or CG techniques and media as an approach to concept drawings and renderings. May be repeated once for credit with recommendation from the instructor. **Prerequisite**: DAA115 AND DAA212, **Co-requisite**: None

DAA399 SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Advanced course on a special topic in Digital Art and Animation. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

DAA400 COMPOSITING AND SPECIAL EFFECTS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Explores the digital motion picture production environment as 'illusion factory'. Both naturalistic/realistic and experimental modes of digital effects will be examined. The course will focus on the role played by storyboarding, scripting, and how these relate to the combination of live action with computer- generated images (CGI). Students work in teams to create video projects using special effects, match/moving lighting, blue/green screen compositing, color correction, and motion graphics. The relationship of 'pre-visualization' to a finished work will also be explored, and how

these techniques are affecting the traditional working approach to movie making. **Prerequisite**: DAA248 OR DAA270, **Co-requisite**: None

DAA410 STORYBOARDING 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This class is a continuation of Storyboarding 1. Students will continue to board and pitch to pre-selected scripts as well as create boards for advertising, in-game progressions and work with other students to build a solid pre-visualized script short. Topics include developing quality emotion boards, value and color scripts and their implied meanings. Students must have a solid foundation in drawing skill and film and editorial methodology. **Prerequisite**: DAA310, **Co-requisite**: None

DAA430 GAME DESIGN 3

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

The creation of rich interactive experiences for wider audiences and social networks. Topics include: player interaction scripting, asset integration, sound, persistence, virality, monetization strategies, and user interface design. **Prerequisite**: DAA375, **Co-requisite**: None

DAA440 MODELING 3

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Explores modeling of creatures and humans for interactive applications including games and cinematic work. Maintaining fidelity to reproduction of artwork and observed subjects, texturing and lighting. Students learn to parameterize for animation and muscular flow. **Prerequisite**: DAA345, **Co-requisite**: DAA 485 M

DAA442 ADVANCED LIGHTING AND LAYOUT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Advanced lighting techniques are mastered to convey storytelling through light. Students apply techniques attained in Lighting and Layout further mastering their artistic expression. Cinematography in the digital realm is used to convey dramatic storytelling through shot composition. Advanced camera usage along with lighting are combined into unified sequences of shots to tell a story that connects with audiences. **Prerequisite**: DAA248, **Co-requisite**: None

DAA460 2D ANIMATION 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Contiuation of 2D Animation 1. Students design and develop characters which they animate in a scene. Advanced study of facial animation and expression with introduction to animal characters and animation. Pantomime, silhouette, strong acting and posing are emphasized. along with careful timing to maximize expression and personality. Analysis of what makes a character look like it is thinking and what makes an expressive pose. Students produce an animated scene using their character in a layout. **Prerequisite**: DAA265, **Co-requisite**: None

DAA465 3D ANIMATION 3

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Contiuation of 3D Animation 2 with an emphasis on acting and performance. Advanced scene blocking for dialogue and introduction to facial animation and expression. Focus on refining animation, breaking joints for overlap, subtle movement and settling. Analysis of phonemes for speech and expression in eyes and mouth to maximize expression. Students will produce original animation with the option of using their own models. **Prerequisite**: DAA365, **Co-requisite**: DAA 485 A

DAA470 ILLUSTRATION 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Students explore personal style in illustration. Course focuses on development of a cohesive body of work. Symbolic and narrative concept development is central. Various traditional media and digital applications will be used. **Prerequisite**: DAA270, **Co-requisite**: None

DAA476 ANIMATED FILM PRODUCTION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Students work in teams to create a short animated film. Focus is on working as effective team while delivering individual specialized skills, the animation pipeline, project management, and communication skills are covered in depth. Students may enter as any of the following, concept artist, modeler, rigger, animator, technical director, and compositor. Training in all of these fields is comprehensive and will prepare student for entry into the job market. **Prerequisite**: College Level=Senior, **Co-requisite**: None

DAA478 STAR THIEF STUDIO

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This course continues the opportunity to learn from professionals and mentors to develop a professional level animated short and interactive book. Students may enter as any of the following: concept artist pre-vis, modeler, rigger, animator, technical director and compositor. Project based-training will prepare the student for entry into the job market. Prior approval required. **Prerequisite**: None, **Co-requisite**: None

DAA479 STAR THIEF STUDIO

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This course continues the opportunity to learn from professionals and mentors to develop a professional level animated short and interactive book. Students may enter as any of the following: concept artist pre-vis, modeler, rigger, animator, technical director and compositor. Project based-training will prepare the student for entry into the job market. Prior approval required. **Prerequisite**: None, **Co-requisite**: None

DAA480A ANIMATION PORTFOLIO 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Students write a project proposal and production schedule as they develop an animated short film that will be completed in Animation Portfolio 2. Students proceed through the film making process: concept develoment, storyboards, animatics, layouts, audio, and production scheduling. Students assemble a rough demo reel that demonstrates competency in the discipline. **Prerequisite**: College Level=Senior, **Co-requisite**: DAA 365

DAA480E ENTERTAINMENT DESIGN PORTFOLIO 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Potfolio 1 is the preparatory class for Portfolio 2, the final element in the DAA program. Students will use their skills in traditional and digital painting, texturing and lighting of 3D models, and portfolio preparation to scope and design a finished portfolio that demonstrates their abilities in Entertainment Design. The portfolio will have a recognizable aesthetic and professional presentation quality. **Prerequisite**: College Level=Senior, **Co-requisite**: DAA 470

DAA480M MODELING PORTFOLIO 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Students produce a demo reel to demonstrate an understanding of the concepts of modeling and proficiency in its techniques. **Prerequisite**: College Level=Senior, **Co-requisite**: DAA 345

DAA485A ANIMATION PORTFOLIO 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Continuation of Animation Portfolio 1. Production of animated short film begun in Animation Portfolio 1. Final animated film along with expanded final proposal is completed. Students present their project to the DAA faculty and discuss the production process and their challenges. Students assemble a finished demo reel that demonstrates competency in the discipline. **Prerequisite**: DAA480A, **Co-requisite**: DAA 465

DAA485E ENTERTAINMENT DESIGN PORTFOLIO 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Portfolio 2 is the final element in the DAA program. Students will use their skills in traditional and digital painting, tecturing and lighting of 3D models, and portfolio preparation to create a finished portfolio that demonstrated their abilities in Entertainment Design. The portfolio will have a recognizable aesthetic and professional presentation quality. **Prerequisite**: DAA480E, **Co-requisite**: DAA 370

DAA485M MODELING PORTFOLIO 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Continuation of Portfolio 1 to complete the Modeling capstone project. Students learn to demonstrate their competency through the development of a demo reel. **Prerequisite**: DAA480M, **Co-requisite**: DAA 440

DAA499ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Advanced course on a special topic in Digital Art and Animation. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

DAT050 MUSIC FUNDAMENTALS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Preparation for DAT102 Music Theory. Basics of musical literacy: Clefs, staves, pitch and rhythmic notation. Time signatures, key signatures and dynamics. Articulation and phrase marks. Basic scale patterns. Music manuscript practices. Other rudiments of music notation as needed to prepare for DAT102. Introductory keyboard musicianship, solfege and rhythmic practice. **Prerequisite**: None, **Co-requisite**: None

DAT051 MUSIC FUNDAMENTALS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
1	15	0	**15**

Bridge course to DAT102 Music Theory 1 in a weekend intensive format. Basics of musical literacy: Clefs, staves, pitch and rhythmic notation. Time signatures, key signatures and dynamics. Articulation and phrase marks. Basic scale patterns. Music manuscript practices. Other rudiments of music notation as needed to prepare for DAT102. DA051 does not fulfill a degree requirement. **Prerequisite**: None, **Co-requisite**: None

DAT102 MUSIC THEORY 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Thorough exercise in rudiments of music (major and minor scales, intervals, triads and seventh chords, key signatures, diatonic modes, elements of rhythm, common music notation practices, dynamics and articulations, phrase structure, diatonic chord function). Beginning ear training and harmonic analysis. Beginning solfege, rhythmic studies and keyboard musicianship. **Prerequisite**: DAT050, **Co-requisite**: None

DAT107 MUSIC THEORY 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Chord progressions, melodic shape, song forms, bass lines, and drumming patterns, introductory musical analysis and instrumental arranging. Focuses on mainstream musical styles (pop, rock, Hip

Hop, etc.). Includes ear training and aural analysis. Solfege, keyboard musicianship and rhythmic studies with focus on mainstream music. **Prerequisite**: DAT102, **Co-requisite**: None

DAT110 DESKTOP PRODUCTION FUNDAMENTALS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to the software, methods and practices of desktop audio and music production, video editing and content delivery. Topics include an overview of computing basics, managing and processing of media, content creation and rendering audio and video files to disk. Methods for online publishing and preparation for on-the-air broadcasting are explored. **Prerequisite**: None, **Co-requisite**: None

DAT115 DESKTOP AUDIO PRODUCTION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Application of the principles, methods and essential tools of audio production in a desktop workstation environment. Topics include the seven basic elements of music (pitch, rhythm, timbre, texture, form, dynamics and spatialization), the methods and practices of MIDI sequencing and digital orchestration, elements of MIDI 1.0 Standard, Standard MIDI Files, fundamental concepts of digital audio, digital audio production techniques, audio file formats, effects processing and plug-ins, and basic concepts of soundtrack creation. **Prerequisite**: DAT110, **Co-requisite**: None

DAT120 INTRODUCTION TO THE TECHNIQUES OF DIGITAL SIGNAL PROCESSING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

This course offers a non-calculus approach to understanding the fundamental concepts of Digital Signal Processing. Topics include: Using trigonometric functions to represent musical sounds; Sampling and quantization; Digital signals; Spectra; the Discrete Fourier Transform; Convolution; Z-transform; Digital Filtering. **Prerequisite**: MATH115, **Co-requisite**: None

DAT150 BEGINNING AUDIO PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to programming with special emphasis on audio examples and applications. Program design and compilation. Programming language basics. Program flow. Interactive widgets and event

handling. MIDI capture and playback. Audio capture and playback. **Prerequisite**: DAT115, **Co-requisite**: None

DAT202 MUSIC THEORY 3

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Intermediate level study of harmony, melodic shape, song forms, part-writing, instrumental arranging, intermediate musical analysis. Topics focus on world music styles and American jazz. Includes ear training and aural analysis. Intermediate solfege, rhythmic studies and keyboard musicianship with an emphasis on world music and American jazz. **Prerequisite**: DAT107, **Co-requisite**: None

DAT207 MUSIC THEORY 4

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Common-practice diatonic and chromatic harmony as applied to Western classical music. Part-writing, analysis of form in classical music, ear training and aural analysis. Advanced solfege, rhythmic studies and keyboard musicianship with a focus on Western classical music. **Prerequisite**: DAT202, **Co-requisite**: None

DAT208 LIVE SOUND

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to the set up and operation of a live sound installation. Basic electrical and hearing safety in the presence of live sound. The acoustics of live sound. Live sound components and their uses. Mixing and monitoring live performances. Ethical conduct in a live sound setting. Basic business transactions and contracts associated with technical services for live productions. **Prerequisite**: DAT115, **Co-requisite**: None

DAT210 DIGITAL SOUND SYNTHESIS 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to the methods and techniques of digital waveform synthesis. Digital synthesis instrument design concepts. Waveforms and spectra, wavetable synthesis, additive synthesis, digital filters and subtractive synthesis. Noise and random event generation. Tuning and intonation systems. Linear and exponential envelopes, modulation techniques. Vibrato and tremolo, amplitude

modulation, frequency modulation. Waveshaping, granular synthesis, basic physical modeling synthesis. Audio processing. Timbral consonance and dissonance. Synthesis and musical style. **Prerequisite**: DAT115, **Co-requisite**: None

DAT212 INTERACTIVE AUDIO PRODUCTION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Application of tools and methods of audio asset production to interactive media. Creating and using an audio design document. Audio compression formats, audio middleware tools and game audio production practices. Adaptive audio techniques and design. **Prerequisite**: DAT210, **Co-requisite**: None

DAT220 STUDIO PRODUCTION 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to recording in a studio environment. Use of a Digital Audio Workstation in a studio production environment. Basics of recording and editing. Introduction to microphone selection and placement. Signal flow in the analog and digital domains. Audio processing with outboard hardware and plug-ins. File management. **Prerequisite**: DAT115, **Co-requisite**: None

DAT250 PROGRAMMING INTERACTIVE AUDIO

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Programming audio assets and processes for interactive media. Audio compression decoding, audio file playback, audio event triggering. MIDI and real-time audio services by platform. Implementing adaptive audio techniques. **Prerequisite**: SWE110 OR DAT150, **Co-requisite**: None

DAT282 DAT PROFESSIONAL PRACTICES SEMINAR

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Presentation of practices essential to a professional career or business in the audio industry. Topics will vary from one offering to the next and each offering typically will feature more than one topic. Suitable topics include music distribution, A/V project management, Web 2.0 for audio, audio intellectual property, and studio proprietorship. **Prerequisite**: DAT220, **Co-requisite**: None

DAT299ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Course on a special topic in Digital Audio Technology. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

DAT301 SONGWRITING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Exercising creativity through songwriting in a project-based format. Discussion of musical techniques, sound choices, and growth models. All aspects of song writing are considered, from the initial creative spark to musical development and presentation, collaboration, making demos, and publishing. **Prerequisite**: DAT202, **Co-requisite**: None

DAT303 CULTURAL TRENDS & MUSICAL STYLE 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

A study of a selection of musical genres, production practices and the reproduction of elements characteristic to a set of genres. Focus on cultural forces, stylistic influences, music theory analysis, performance techniques, technological developments. Production of original music in a given style along with written commentary. **Prerequisite**: DAT202, **Co-requisite**: None

DAT310 DIGITAL ORCHESTRATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Techniques of orchestration applied to a digital music production environment. Examination of traditional orchestrational techniques along with methods specific to digital instruments. Application to both studio music and soundtrack production projects. **Prerequisite**: DAT202, **Co-requisite**: None

DAT320 STUDIO PRODUCTION 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Intermediate level of recording and editing. Music production, audio production for advertising. Production approaches, mixing techniques, intermediate use of compression, equalization. Spatial positioning and stereo image. Critical listening, frequency analysis, mix analysis. Creating sub-mixes, mix automation, in-depth coverage of the use of plug-ins. Session management. **Prerequisite**: DAT220, **Co-requisite**: None

DAT324 STUDIO PRODUCTION 3

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Advanced recording, editing and mixing techniques. Client communication and production management. Mixing under pressure. High track-count mixing. Mix analysis in diverse environments, mix conflict management, vocal sub-mixing, parallel- and serial processing. Working with MIDI- and virtual instruments, pitch- and time processing. Students at this level should work on complex projects that demonstrate knowledge and experience in a full-cycle studio production, including pre-production, managing a recording session, various mixing approaches, etc. **Prerequisite**: DAT320, **Co-requisite**: None

DAT326 DIGITAL SOUND DESIGN

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Application of studio production skills to sound effect sourcing and generation for film and video production and post-production. Analysis of the soundtrack, sound map and visual map generation, ADR, foley. Use of professional sound effect libraries. Advanced studio- and location recording, audio editing and processing techniques, synchronization, audio post mixing, project management and delivery formats for audio for film and video. **Prerequisite**: DAT320, **Co-requisite**: None

DAT335 MUSIC PERCEPTION AND COGNITION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Survey of research on perceptual and cognitive theories of sound and music. Topics include characteristics of sound, anatomy of the ear, hearing function, cognitive skills related to music perception, and memory in music. **Prerequisite**: SCI220, **Co-requisite**: None

DAT338 CULTURAL TRENDS & MUSICAL STYLE 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Continues the historical purview and the production and writing requirements of DAT303 at a more advanced level. Focus on use of stylistic and theoretical analyses to apply established musical styles and reproduce relevant production practices. **Prerequisite**: DAT202, **Co-requisite**: None

DAT340 FILM SCORING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Analysis of acclaimed film scores, examination of the role of music and sonic textures based on traditionally and digitally orchestrated film scores. Application of composition, arrangement and digital audio production techniques to the creation of original music for motion pictures. Music spotting, setting up synch points, tempo map, scoring to picture. Students work with live performers and/or sampled instruments to support setting, narrative, characters and action. **Prerequisite**: DAT202 AND DAT320, **Co-requisite**: None

DAT342 INTERACTIVE GAME COMPOSITION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Advanced composition of videogame music. Analysis of settings, characters and gameplay for music support. Designing for adaptive evolution of musical themes. Orchestrational aspects of adaptive music. Students will score model interactive projects. **Prerequisite**: DAT202 AND (DAT324 OR DAT326), **Co-requisite**: None

DAT350 AUDIO PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to programming plug-ins for audio applications. Study of features of commercial plug-ins. Introduction to plug-in architecture. Implementation of basic DSP operations. Course culminates in a final project. **Prerequisite**: SWE310, **Co-requisite**: None

DAT355 AUDIO FOR VIDEO GAMES

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Design and development of audio resources for real-time interactive systems. Focus on technical aspects of audio integration into a game build. Adaptive audio techniques. Requires a collaborative project that successfully applies course concepts. **Prerequisite**: DAT324 OR DAT326, **Co-requisite**: None

DAT360 DIGITAL SIGNAL PROCESSING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Introduction to digital signal processing, sampling and quantization, A/D and D/A converters, discrete time systems, Discrete Fourier Transform, convolution, z-transforms, transfer functions, digital filter realizations, and fast Fourier transforms. Introduction to digital filter design and digital audio applications. **Prerequisite**: SWE310, **Co-requisite**: None

DAT365 DIGITAL FILTER DESIGN

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Design of digital FIR and IIR filters. Analysis of impulse response. Z-transform and geometric methods of filter design. Design and implementation of Elliptical, Bessel, Butterworth, Chebyshev filter types. Windowing. Applications to audio. **Prerequisite**: DAT360, **Co-requisite**: None

DAT420 AUDIO MASTERING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Final preparation of a recording for disk manufacture. Advanced use of audio compression and EQ for mastering. Crest factor. Critical listening. Understanding of manufacturing standards for optical media. **Prerequisite**: DAT320, **Co-requisite**: None

DAT450 AUDIO SOFTWARE DEVELOPMENT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Design and implementation of software applications for MIDI and digital audio. Subsystem architecture. Real-time MIDI playback and recording engines, audio streams, and audio capture. Sample processing and plug-in design. Course project will include implementation of a real-time MIDI and digital audio application. **Prerequisite**: DAT360, **Co-requisite**: None

DAT455 GAME AUDIO PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Implementation of audio assets into a game build. Low- and high-level audio system architecture, decoding audio compression formats, adaptive audio software design, interactivity. **Prerequisite**: DAT360, **Co-requisite**: None

DAT460 DIGITAL AUDIO ELECTRONICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Applications of DSP concepts to DSP devices. DSP chip architecture and opcodes. Circular buffers and convolution. Algorithm design and cross-compilation. Digital audio systems architecture and design considerations. Lab experiments taken from real-world applications such as digital filter design, reverberation and special audio effects. **Prerequisite**: DAT365, **Co-requisite**: None

DAT480 PORTFOLIO 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Part I of the senior capstone project. The practical focus will be on topic research, identifying relevancy, practicality, resources, challenges, competitive analysis and marketable advantages, project planning and gathering resources. Students will complete a rapid prototyping assignment based on their chosen project. Requirements and deliverables of the course will be customized based on the individual needs of each student's chosen portfolio product or service, and may include a marketing plan, an artist one-sheet or a business plan. The lecture part of the course will be also customized and may include topics ranging from intellectual property, distribution and licensing, as they apply to audio production. The course will culminate with a written progress report, a Portfolio 2 production plan and time-line. **Prerequisite**: DAT324 OR DAT326, **Co-requisite**: None

DAT481 AUDIO ENGINEERING PROJECT 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

The first semester capstone project for the Audio Software Development and Engineering track. Planning stage of a major year-long development project, such as an audio application, plugin or app. This phase of the project should culminate in a written project plan and oral presentation. **Prerequisite**: DAT350, **Co-requisite**: None

DAT482 GAME STUDIO 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Practical application of game audio design and techniques in a multi-disciplinary team working on an instructor-led game project. Opportunities to compose a game score, design sound effects, write, record and edit dialogue, manage audio assets and program game audio. **Prerequisite**: DAT342 OR DAT355, **Co-requisite**: None

DAT483 DAT COLLABORATIVE PROJECT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

A collaborative, potentially interdisciplinary, practical project. May be a live project with real-life client(s) and strict deadlines. Students work on two 7-week, or one 15-week full-cycle audio- or audiovisual production in an audio production team, where student may be required to fulfill various roles, typically that of an audio engineer, sound designer, composer and project manager. Full-cycle production may include client meetings, concept development, production and delivery. The lecture part of the course will include client communications, team management- and communication principles, the EER approach and file management practices. The deliverables of the course can be integrated into individual student portfolios. Prior approval required. **Prerequisite**: DAT320, **Co-requisite**: None

DAT485 PORTFOLIO 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Part II of the senior capstone project. The practical focus will be on the execution of student's Portfolio 1 production plan, guided by reviews and frequent feedback from instructor. May include registering intellectual property, packaging finished product and setting up online promotion- and delivery channels. The lecture part of the course will be on product- or service presentation for potential employees and/or clients, market positioning. Final delivery of the project will include an oral presentation and a URL to a web-based written presentation. **Prerequisite**: DAT480, **Co-requisite**: None

DAT487 AUDIO ENGINEERING PROJECT 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

The completion and implementation phase of the capstone project for the Audio Software Development and Engineering track. This project will culminate in a completed project along with write-up and oral presentation. **Prerequisite**: DAT481, **Co-requisite**: None

DAT488 GAME STUDIO 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Continuation of a project begun in DAT482 or a separate project. This course offers the opportunity to advance beyond the accomplishments of DAT482 in a multi-disciplinary team setting. **Prerequisite**: DAT482, **Co-requisite**: None

DAT498 SPECIAL PROJECT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Individual or group research and development on a special area of interest in digital audio. Topics are developed in consultation with a faculty advisor. **Prerequisite**: None, **Co-requisite**: None

DMM110 BETA BUSINESS FROM THE GROUND UP 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Initial survey course exploring aspects of digital media industries through a hands-on, interactive exploration of the company business model building process. Perfect for students looking to build their own animation studio, independent game company, recording studio or software company. Students create their business models for their own team based businesses which explores: feasibility, markets, costs, revenues, finance, operations, marketing, channels, team recruitment, execution and pitching among other topics. **Prerequisite**: None, **Co-requisite**: None

DMM120 COMMUNICATING FOR SUCCESS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Students are taught the essential techniques for communicating effectively in the digital media industry as well as portfolio management. This course walks students through thinking critically as well as the application of about communication theory to gain key management skills such as communicating with constituencies, writing memos and emails, communicating ethically, listening and giving feedback, introduction to negotiation and working in groups, and giving presentations. **Prerequisite**: None, **Co-requisite**: None

DMM125 COVER YOUR ASSETS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Basic understanding of U.S. intellectual property law as it applies to current business as well as legal issues connected to digital media and entertainment. This course aims to provide students with a fundamental framework for analyzing and understanding issues connected to intellectual property, notably copyright, patent and trademark law. In addition, this course covers appropriate legal structures, initial branding, insurance protections, basic contract review and when to contact an attorney. **Prerequisite**: None, **Co-requisite**: None

DMM130 DIGITAL MEDIA CREATIVITY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Course explores the inspiration behind digital media creation, how new ideas are generated, how concepts are iterated upon, and different creative processes that can be utilized to think outside the box. Students collaborate in work teams to create brand new ideas and improve them in a limited span of time. **Prerequisite**: None, **Co-requisite**: None

DMM141 DIGITAL MEDIA MARKETING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Marketing concepts are studied and applied to awareness campaigns for local companies using digital media tools. Students are introduced to tactical marketing through segmentation, situation analysis, marketing mix, implementation and metrics. Students will work in groups to create marketing plans, test their initiatives and measure the results. **Prerequisite**: None, **Co-requisite**: None

DMM150 DIGITAL MEDIA FORECASTING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Students will develop techniques similar to a crystal ball to peer into the future of their industry whether animation, gaming, engineering or audio using the most applicable principles from micro and macroeconomics. This course will explore concepts of supply and demand, purchasing behavior, circular flow, interest rates, inflation, unemployment, supply and demand curves, factors of production, international trade, monetary and fiscal policy as well as the ability to do economic forecasting. This course will make economic theory practical for everyday use by a combination of theory, discussion and gamification using the popular simulator title SimCity. **Prerequisite**: MATH115, **Co-requisite**: None

DMM210 DIGITAL MEDIA BUSINESS MODELS 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours

3	45	0	**45**

Second course delving into aspects of digital media industries through a hands-on, interactive exploration of the company business model building process. Students will expand their knowledge by completing a full business model canvas along with accompanying financials and business plan. Students will document strategic partners versus suppliers, resources, variable costs, fixed costs, multiple revenue streams, pivots and changing value propositions. Emphasis is on skill building in each of the major processes of venture building. **Prerequisite**: DMM110, **Co-requisite**: None

DMM230 BUSINESS DEVELOPMENT AND NEGOTIATIONS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

The basic foundations and processes of securing strategic partners and negotiation—with superiors, subordinates, co-workers, clients, suppliers, and others. Students will explore the principles of relationship networking and how they are used in business development as well as draft key components of a memorandum of understanding or contract between the student and a strategic partner. Course requires practice with cross-cultural negotiation, dispute resolution, coalition formation and multiparty negotiations, competitive negotiations, and negotiating via information technology. **Prerequisite**: DMM110 OR DMM120, **Co-requisite**: None

DMM241 CONSUMER & MARKET BEHAVIOR

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Learn the concepts and techniques of market segmentation. Gain experience with quantitative, qualitative and design tools for user-oriented exploration, innovation and improvement. Includes techniques to study consumer psychology, demographics, psychographic, segmentation and behavioral economics. **Prerequisite**: MATH115 AND DMM141, **Co-requisite**: None

DMM250 FINANCIAL MODELS AND MANAGEMENT 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Provides an understanding of how to measure, analyze and manage a digital media business through the creation and collection of financial data, financial statements and key return metrics. Students will learn the fundamental methods by which decisions are made both by management and external capital providers. **Prerequisite**: MATH115 AND DMM110, **Co-requisite**: None

DMM260 TEAM-BUILDING & COLLABORATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Multiple aspects of collaboration are studied with models of team work as students create and test their own leadership styles. Team building is explored during cycles of team formation, brain storming and collaboration norms while maintaining an assigned service learning project. **Prerequisite**: DMM110, **Co-requisite**: None

DMM270 PROJECT MANAGEMENT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Project management is the discipline of planning, organizing, and managing resources to bring about the successful completion of specific project goals and objectives. Project teams will gain practical experience in completing an assigned project by organizing it, assigning tasks, and developing a sequence of activities. Students will become fluent in MS Project and Excel through the creation and management of timetables, schedules, project completion, progress tracking and results evaluation. **Prerequisite**: None, **Co-requisite**: None

DMM310 DIGITAL MEDIA STRATEGIC MANAGEMENT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

A detailed exploration of innovation and change management as practiced in a growing organizational setting. Students develop skills in identifying problems, analyzing solutions and making recommendations in situations representative of the real digital media companies. Students simulate the role of managers of the organization. **Prerequisite**: DMM210, **Co-requisite**: None

DMM340 SOCIAL MEDIA, ENGAGEMENT AND ANALYTICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This course is a combination of marketing, desktop production and web design. Students learn the basic principles of online marketing by learning how to create, publish, and maintain a multi-page interactive web site which promotes a digital media product or service. Students will study social engagement and social value models for a range of entities, including not-for-profits and social enterprises as well as commercial organizations. Principles of social and conventional media engagement are presented as well as techniques for measuring engagement and keeping up with the fast changing social engagement landscape. **Prerequisite**: DMM110 OR DMM141, **Co-requisite**: None

DMM350 FINANCIAL MODELS AND MANAGEMENT 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Students will be introduced to funding options such as debt, equity, angel investments and how digital media companies are financed. Course prepares students for how financial markets operate, interest rate determination, time value of money, and role of investment risk and return. Students will explore all aspects of fundraising from crowdfunding to bootstrapping to venture capital to initial public offerings in order to understand what types of financing are most appropriate at what times. **Prerequisite**: DMM250, **Co-requisite**: None

DMM365 ETHICS, DEVELOPMENT AND RESPONSIBILITY MANAGEMENT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Concepts of personal development, lifelong learning, team building and leadership are taught utilizing the context of a personal business plan. Students create an on-going self-development plan by completing a personal self-assessment that codifies their strengths and weaknesses. This course pushes students to develop a mental model of who they want to be as an manager, recruit a team of mentors and track skill development. **Prerequisite**: DMM260 OR DMM270, **Co-requisite**: None

DMM430 DIGITAL MEDIA DESIGN LAB

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This course focuses on the creation and delivery of digital content such as film, music and games. This course will provide a survey of technologies such as mp3, DVD, portable devices, broadband networks and wireless systems. Students will become familiarize with publishing software, server technologies and transaction systems. The goal of this course is to provide the student with an implementation perspective of how technology supports digital media development and distribution. Students will design a product using a customer-oriented design process, employing methods such as client observation and crowdsourcing to design new products.This course focuses on the creation and delivery of digital content such as film, music and games. This course will provide a survey of technologies such as mp3, DVD, portable devices, broadband networks and wireless systems. Students will become familiarize with publishing software, server technologies and transaction systems. The goal of this course is to provide the student with an implementation perspective of how technology supports digital media development and distribution. Students will design a product using a customer-oriented design process, employing methods such as client observation and crowdsourcing to design new products. **Prerequisite**: DMM230 OR DMM260 OR DMM270, **Co-requisite**: None

DMM440 DIGITAL MEDIA STORYTELLING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours

3	45	0	**45**

Students are trained on the ability both to recognize and communicate effectively in speech or writing in order to garner the enthusiasm and support of others. Provides practice in presenting oneself, one's organization, and one's ideas orally, in writing, social media and marketing materials. This course involves guided practice, feedback and peer evaluation for individual and group pitches. **Prerequisite**: ENG100 AND DMM120 AND DMM141, **Co-requisite**: None

DMM450 DIGITAL MEDIA OPERATIONS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Students will explore the design, scheduling and control of systems that efficiently use human and capital inputs to create products and services for companies and consumers. Coursework will walk through capacity planning, facility location and layout, employee and task scheduling, purchasing, and quality management. Class will explore the growth cycles of a company and gain an understanding of different issues, options and strategies to consider as the company reaches each growth cycle. **Prerequisite**: DMM110, **Co-requisite**: None

DMM470 LEADERSHIP & EMERGING ISSUES

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Examines key emerging issues related to leadership and opportunity in the rapidly changing global digital world, including its effect on technological change, culture, communications, product life cycles and competition. Explores new technologies on the horizon, and integrates expanded data, such as new demographies, to explore and analyze these new technologies. Also includes the capacity to innovate, change, and reconfigure resources and capabilities to meet emerging needs in a rapidly-changing world within the organization. Prior approval required. **Prerequisite**: None, **Co-requisite**: None

ENG050 GRAMMAR AND COMPOSITION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Extensive written work stressing correct spelling, accurate sentence structure, and logical paragraph development. Credit earned does not count toward a degree.(Remedial course – does not carry degree credit) **Prerequisite**: None, **Co-requisite**: None

ENG100 COMPOSITION AND CRITICAL THINKING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This course develops written communication and critical thinking skills. It explores techniques and practices of expository and argumentative writing. Students learn to generate ideas for writing based on readings, learn to organize and support their ideas, and learn to apply techniques of revision to produce polished, professional work. Content, format and correct grammatical structures are emphasized. **Prerequisite**: ENG050, **Co-requisite**: None

ENG199ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Course on a special topic in English. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

ENG210 CULTURAL DIVERSITY IN LITERATURE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Develops analytical and critical thinking skills through literature, which deals directly with issues of multiculturalism. Students apply the concepts learned in ENG100. **Prerequisite**: ENG100, **Co-requisite**: None

ENG220 TECHNICAL WRITING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Technical Writing prepares students to design and write effective technical documents for both written and digital media, with particular emphasis upon technical reports, problem-solving and decision-making reports, as well as product description and specification documentation. To support these writing tasks, the course guides students through research and documentation for technical environments, drafting and revision processes, and readability and accessibility of written texts for technical and non-technical audiences. **Prerequisite**: ENG100, **Co-requisite**: None

ENG227 SCRIPTWRITING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

An introduction to the techniques used by screenwriters in film, animation, and video game development. Students will learn the basics of how a writer formulates and executes a story concept. Emphasis will also be placed on the writer's role on a production team. **Prerequisite**: ENG100, **Co-requisite**: None

ENG228 CREATIVE WRITING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

An introduction to techniques for brainstorming and developing story with an emphasis on how these tools are relevant to visual media. Creative writing is used to teach professional methods for developing effective characters, story concepts, plots, and dialogue. **Prerequisite**: ENG100, **Co-requisite**: None

ENG230 CLASSICS OF THE WORLD STAGE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This course will study significant dramas from around the world, helping to put into a global perspective the evolution of this form of art and entertainment. The focus will be on analyzing the work of dramatists and playwrights who saw universal themes in the lives of people around them. In addition to reading, discussing, and writing about six plays, students will also examine their structure as performance, including the differing interpretations of each play. **Prerequisite**: ENG100, **Co-requisite**: None

ENG235 ART OF ARGUMENTATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Intermediate to advanced principles of expository writing. Focus on writing tasks both for college and professional environments. Assignments provide practice in a variety of modes of writing including narrative, analysis, explanation, argumentation, critique, and oral presentation. **Prerequisite**: ENG100, **Co-requisite**: None

ENG250 SPEECH AND ORAL COMMUNICATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Development and improvement of effective oral communication skills in formal and informal settings. Emphasis on preparation of topics, development of student as effective communicator, and clear presentation of research. **Prerequisite**: ENG100, **Co-requisite**: None

ENG280 APOCALYPSE & THE AMERICAN IMAGINATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Apocalypse & The American Imagination explores the role apocalypse plays in American culture. The course teaches students to isolate and analyze memes and tropes in popular culture and media, and develop a deeper understanding of American culture in the process. The seminar is additionally designed to increase students' ability to express themselves in both writing and oral presentations. **Prerequisite**: ENG100, **Co-requisite**: None

ENG299 SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Course on a special topic in English. May be used as a technical elective and repeated as topic changes. **Prerequisite**: ENG100, **Co-requisite**: None

ENG300 ESSENTIALS OF WRITTEN COMMUNICATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

A course in expository writing available to students who have completed their lower division writing and research skills to meet the demands of upper-division college writing. This course provides the additional opportunity for students to college level writing. This couse provides the additional opportunity for students to review, reassess, and futher develop their writing skills. **Prerequisite**: ENG100, **Co-requisite**: None

ENG310 CLASSICS OF WESTERN DRAMA

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Man has always looked to theatre as a form of entertainment. Drama has also been used to address religious, political, social and cultural issues and to shape people's thoughts. Through reading plays, attending lectures, participating in class discussions, writing papers and watching performances, this course will examine the evolution of the dramatic art. It will also focus attention on the foundations of modern animation and scriptwriting as they were established centuries ago by great dramatists

and playwrights who saw universal themes in the lives of people around them. **Prerequisite**: ENG100, **Co-requisite**: None

ENG399ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Advanced course on a special topic in English. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

ENG498 SPECIAL PROJECT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Individual or group research and development on a special area of interest in English. Topics are developed in consultation with a faculty advisor. **Prerequisite**: None, **Co-requisite**: None

ENG499ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Advanced course on a special topic in English. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

ENG999EL ENGLISH ELECTIVE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	0	0	**0**

Prerequisite: None, **Co-requisite**: None

GAM225 INTRODUCTION TO GAME PRODUCTION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Introduction to video game development and various project production models and team structures through lectures, discussions and simple game projects. Lessons learned from studying project post-mortems, case studies and employing various tools, techniques and strategies will develop skills in

ideation, iteration, troubleshooting, risk assessment, adaptation, communication, team management, organization and leadership. **Prerequisite**: None, **Co-requisite**: None

GAM235 GAME USABILITY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

This course introduces assessment and analysis of game usability throughout game production. Students run usability and quality assurance testing sessions for games from other project classes. Topics include focus testing, moderated discussion groups, roles and processes in quality assurance, bug reporting and regression, player psychology and observation, and measuring and quantifying subjective experiences. **Prerequisite**: GAM225, **Co-requisite**: None

GAM350 GAME DESIGN 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Introduction to the fundamentals of game design through lectures and the building of board games in a collaborative workshop environment. Topics covered include: history of computer games, writing rules, play balance, statistics and probabilities, layout and level design, psychology and replayability, atmosphere, design documents and multiplayer issues. **Prerequisite**: ENG100, **Co-requisite**: None

GAM355 LEVEL DESIGN 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Introduction to level design for video games from developing level ideas into executable level maps to implementation, play-testing and iteration. Exposure to level editors will provide hands-on experience in building levels. Level design principles include: pacing, balance, difficulty ramping, level flow, hooks and level progression. Proper level design methodology will be used to build game levels. **Prerequisite**: DAA240 AND SWE100, **Co-requisite**: None

GAM360 GAME ANIMATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

In this class students will create animations for Game Development. Students will focus on Game specific animations such as Prototypes, In-Game cycles, Paired Animations and Combat. Students will get familiar with the animation pipeline, tools, and associated physics using a game engine. Students will learn to speed up animation workflow, and capture character personality & aesthetics according

to direction given. In-Game animations will cover basic Idles, Hits, Attacks, Chain attacks and Reacts. **Prerequisite**: DAA244, **Co-requisite**: None

GAM370 ENVIRONMENT ART

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Covers all aspects of environment art for real-time applications (current-gen games, virtual worlds, and 3D mobile/flash games). The technical requirements and conventions of general games modeling will be covered, with a focus on translating the student's general modeling and texturing skills to the more technical and systematic world of environment art for use in a widely-used game engine. **Prerequisite**: DAA340, **Co-requisite**: None

GAM376 GAME DESIGN 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Students will create playable video game prototypes. Topics include game design concepts, theory and methodologies, storytelling, game analysis, player engagement, player immersion, gamification, and techniques for monetization. **Prerequisite**: GAM350, **Co-requisite**: None

GAM415 LEVEL DESIGN 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Focus on the design and implementation of immersive player experiences using commercial game engines and level editors. Advanced level design topics are covered including scripting interactive level sequences, level lighting, material editing, particle systems, development and use of custom assets, animation, user interface, in-game cinematics and choreography. **Prerequisite**: GAM355, **Co-requisite**: None

GAM475 GAME STUDIO 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

A multi-disciplinary team is guided through a typical video game development production lifecycle. The focus is on working as an effective and efficient development team to produce a capstone game project on schedule. Skillsets are tested and knowledge is directly applied. Team members assume roles similar to those in the video game industry and will have opportunities to work and network with industry professionals. Prior approval required. **Prerequisite**: None, **Co-requisite**: None

GAM476 GAME STUDIO 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

A multi-disciplinary team is guided through the second half of a typical video game development production lifecycle. The focus is on working as an effective and efficient development team to produce a capstone game project on schedule. Skillsets are tested and knowledge is directly applied. Team members assume roles similar to those in the video game industry and will have opportunities to work and network with industry professionals. Prior approval required. **Prerequisite**: None, **Co-requisite**: None

HUM120 THE NATURE AND HISTORY OF WESTERN ART

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This course provides a broad introduction to the nature, vocabulary, media, and historical development of the visual arts. Major categories are architecture, sculpture, painting, and printmaking. Exposure to major art works in Western tradition from Paleolithic times to present. Students develop criteria for answering the question "what is art?" **Prerequisite**: None, **Co-requisite**: None

HUM122 WORLD MUSIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Study of representative music and instruments from world cultures including Middle Eastern, Asian/Pacific, Indian, African, Latin American, North American and Western. Emphasis is on world music's impact and influence on contemporary American musical styles and performance. **Prerequisite**: None, **Co-requisite**: None

HUM125 MUSIC IN WESTERN CULTURE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Study of musical examples and compositional techniques evolving from the Medieval period to the present. Characteristic forms and styles, analysis and listening examples of each era, and leading composers are explored. Students examine the significance of music for people and social bases for the development of music. **Prerequisite**: None, **Co-requisite**: None

HUM130 MODERN ART HISTORY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This course examines the history of Western art from the advent of the avant-garde to post-modernism. Emphasis is given to the social/political and theoretical developments coinciding with the changes in culture. **Prerequisite**: None, **Co-requisite**: None

HUM140 MODERN ART HSTORY AND FILM

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This course examines the history of Western art from the advent of the avant-garde to Postmodernism. Emphasis is given to the social/political and theoretical developments coinciding with changes in culture. The class will focus on films that capture the spirit of their times. **Prerequisite**: None, **Co-requisite**: None

HUM199ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Course on a special topic in humanities. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

HUM200 HISTORY OF THE MODERN WORLD

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This course explores outstanding political, intellectual, philosophical, military, social and economic trends, movements, and events from the Enlightenment to the present. Major focus is on analysis of the larger forces that have shaped the contemporary world, while the course also examines the role of influential individuals from Anthony (Susan B.) to Zola (Emile). **Prerequisite**: ENG100, **Co-requisite**: None

HUM210 THE EXPERIMENTAL TRADITION IN FILM, MUSIC, AND LITERATURE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

In this course, students will have the opportunity, through direct experience of these works, discussion, writing and oral presentation, to study the examples, aesthetics, methods, media and polemics of 20th Century experimentalism. **Prerequisite**: ENG100, **Co-requisite**: None

HUM227 FILM HISTORY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Surveys the history of film from 1945 to the present. Students learn about the evolution of film technology as well as the social and cultural relevance of the various periods. **Prerequisite**: ENG100, **Co-requisite**: None

HUM228 VIDEO GAMES AND SOCIETY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Survey of the history of video games and the influential companies, personalities and technologies that have impacted industry and everyday life. Topics include: examination of industry market segments, "gamification", serious games, multiplayer games, and global markets. **Prerequisite**: ENG100, **Co-requisite**: None

HUM230 HISTORY OF ANIMATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Exposes students to the historical development of animation as an art form and the techniques, technologies, and personalities responsible for the creation of animated forms and characters. Includes the social and economic content behind the development and popularity of characters and approaches. **Prerequisite**: ENG100, **Co-requisite**: None

HUM240 SPACE, TIME, MIND

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Conceptual and experiential investigation of the basic framework of existence and knowledge. Conventional notions of space and time vs. expanded views which consider vast and infinitesimal scales. Absolute vs. relative. How mind creates and operates within a temporal/spatial framework. Exercises and experiments to accompany reading and discussion. **Prerequisite**: ENG100, **Co-requisite**: None

HUM299 SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Course on a special topic in Humanities. May be used as a technical elective and repeated as topic changes. **Prerequisite**: ENG100, **Co-requisite**: None

HUM361 CONTEMPORARY ETHICAL ISSUES

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Examines philosophical foundations of ethical theory and applied ethics. Students discuss historical approaches and contemporary case studies in relation to ethical theory and personal values. **Prerequisite**: ENG100, **Co-requisite**: None

HUM399ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Advanced course on a special topic in humanities. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

HUM400 RESEARCH AND WRITING CAPSTONE PROJECT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Students develop an in-depth knowledge in a particular topic. They apply their skills of topic development, critical reading, research techniques, use of sources in arguments, and advanced composition to write a comprehensive research paper. **Prerequisite**: College Level=Senior, **Co-requisite**: None

HUM499ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Advanced course on a special topic in humanities. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

MATH003 INTERMEDIATE ALGEBRA

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Intermediate Algebra including exponents and polynomials, equations and systems of equations in one and two variables, functions and graphs, and exponential and logarithmic functions. Credit earned does not count towards a degree. **Prerequisite**: None, **Co-requisite**: None

MATH115 BASIC TOPICS IN MATHEMATICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Principles and applications of inequalities, functions and graphs, polynomials and rational functions, systems of equations and inequalities, matrices and determinants. Analytic geometry including conic sections. Trigonometric functions, identities, equations, inverse functions, trigonometric applications including vector definition, operations, and dot product. Students are introduced to the basic concepts for computer graphics. **Prerequisite**: MATH003, **Co-requisite**: None

MATH116 PRE-CALCULUS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	60	0	**60**

Topics include principles and applications of factoring, rational expression, radicals, solutions and graphs of linear, quadratic equations and inequalities; polynomials, rational,exponential, trigometric, and logarithmic functions; matrices, determinants, complex numbers; **Prerequisite**: MATH003, **Co-requisite**: None

MATH143 CALCULUS 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	60	0	**60**

Functions. Limits. Derivatives. Curve sketching. Mean Value Theorem. Trigonometric functions. Related rates. Maximum-minimum problems. Inverse functions. Definite and indefinite integrals. Logarithmic, exponential, and hyperbolic functions. Applications of integration. Simple differential equations. **Prerequisite**: MATH116, **Co-requisite**: None

MATH144 CALCULUS 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Integration by trigonometric substitution, by parts, and by partial fractions. Arc length. Indeterminate forms. Improper integrals. Taylor's Theorem including a discussion of the remainder. Sequences. Series. Powerseries. Separable differential equations. First order linear differential equations. Homogeneous second order linear differential equations with constant coefficients. **Prerequisite**: MATH143, **Co-requisite**: None

MATH240 APPLIED PROBABILITY AND RANDOM PROCESSES

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Fundamental concepts of probability, discrete and continuous random variables, probability distributions, sampling, estimation, elementary hypothesis testing, basic random processes, correlation functions, and power-spectral-density functions. Applications include music, speech and image and processing. **Prerequisite**: MATH144, **Co-requisite**: None

MATH245 CALCULUS 3

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Vectors. Lines. Planes. Quadratic surfaces. Polar. Cylindrical and spherical coordinates. Partial derivatives. Directional derivatives. Gradient. Divergence. Curl. Chain rule. Maximum-minimum problems. Multiple integrals. Parametric surfaces and curves. **Prerequisite**: MATH144, **Co-requisite**: None

MATH310 DISCRETE MATHEMATICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Logic. Set theory. Functions. Relations. Proofs by mathematical induction. Recursion and program correctness. Fundamentals of counting, and discrete probability. Elementary graph theory. Introduction to analysis of algorithms. **Prerequisite**: MATH144, **Co-requisite**: None

MATH320 GEOMETRY & TRANSFORMATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Descriptive geometry: points, lines, planes, intersections, spatial relationships. Transformations. Projective Geometry: plane transformations, homogeneous coordinates, space transformations,

perspective projection. Differential Geometry: Theory of curves and surfaces. Quaternions and rotation sequences. **Prerequisite**: MATH144, **Co-requisite**: None

SCI100 BASIC CONCEPTS OF PHYSICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Basic principles: motion, gravitation, electricity and magnetism, light, relativity and atomic physics. Students are introduced to the fundamentals of physics. **Prerequisite**: MATH115 OR MATH116, **Co-requisite**: None

SCI110 THE SCIENCE OF MOTION: HUMANS, ANIMALS, OBJECTS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Analysis of movement of biological systems and objects based on the mechanical principles of motion. Topics covered in lectures and labs: linear kinematics including walking, running, jumping, and climbing; kinematics of joints (elbows, knees, hips, etc.), angular kinematics, forces acting on a body and objects, work and energy, positive and negative work of muscles and total body, conservation of energy during body and object movement, center of mass and its calculation, torque, mechanical and anatomical levers, joint torque calculation and joint reaction force, rotational motion and angular momentum, buoyancy, lift and drag forces acting on wings, swimming propulsion. Fulfills the requirement for a basic lab science **Prerequisite**: MATH115 OR MATH116, **Co-requisite**: None

SCI130 BASIC CONCEPTS OF ANATOMY AND PHYSIOLOGY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

This course presents a systematic approach to the study of the human body beginning with an introduction to anatomical terminology. Topics covered include the gross and microscopic anatomy of the following system: skeletal; muscular, nervous, circulatory, respiratory, digestive, urinary and reproductive. Laboratory work will parrallel and reinforce concepts introduced in the lectures, using practical models and other visual aids. **Prerequisite**: MATH115 OR MATH116, **Co-requisite**: None

SCI145 COLLEGE PHYSICS 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Fundamentals of mechanics, fluids, and heat, including vectors, translation and equilibrium, acceleration, projectile motion, Newton's Laws, work, energy, power, impulse, momentum, uniform circular notion, rotation of rigid bodies, simple changes, elasticity, simple harmonic motion, fluid statics and dynamics, temperature, thermal expansion, heat units, heat transfer, thermal properties of matter, the thermodynamics and wave motion. Illustrative laboratory work to complement theory. Students are introduced to physics concepts for science and engineering. **Prerequisite**: MATH143, **Co-requisite**: None

SCI200 GENERAL SCIENCE: PRINCIPLES AND TRENDS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

This course introduces the fundamentals of classical and modern physics. Topics include basic principles of mechanics, fluids and thermodynamics, waves motion, sound, light, electricity and magnetism, and modern physics, including special theory of relativity, quantum mechanics, atomic and nuclear physics. **Prerequisite**: SCI100 OR SCI110 OR SCI130, **Co-requisite**: None

SCI220 FOUNDATIONS OF MUSICAL ACOUSTICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Waves and wave propagation, sound pressure level and measurement, reflection, absorption and diffusion. Acoustic characteristics of building materials, room acoustics. Bass traps, diffusers and other acoustic interventions. Acoustic aspects of studio design. **Prerequisite**: SCI100, **Co-requisite**: None

SCI245 COLLEGE PHYSICS 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Fundamentals of sound, light electricity and magnetism, and modern physics, including illumination, reflection, refraction, interference, diffraction, polarization, DC and AC circuits, magnetism, electrochemistry and electronics. Illustrative work to compliment theory. Students are introduced to physics concepts for science and engineering. **Prerequisite**: SCI145, **Co-requisite**: None

SCI345 COLLEGE PHYSICS 3

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

This course introduces the fundamentals of classical and modern physics. Topics include principles of Newtonian mechanics, thermodynamics, electricity and magnetism, and modern physics, including special theory of relativity, quantum mechanics, atomic and nuclear physics, and subatomic particle physics. **Prerequisite**: SCI245, **Co-requisite**: None

SL101 COGSWELL XL

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Cogswell XL is designed to assist first time freshmen in adapting to college life. Students will participate in discussions about college academic expectations and standards, time management and organizational skills, college social life and positive social skills such as boundary setting, assertiveness and self-confidence, drugs, alcohol and sexuality, and more. This course is mandatory for all first time freshmen and is taught during the first six weeks of the semester. **Prerequisite**: None, **Co-requisite**: None

SSC180 INTRODUCTION TO PSYCHOLOGY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Introduces students to the scientific study of human behavior. Topics may include natural foundations of behavior, motivation and emotion, critical thinking processes, personality traits, developmental, cognitive and social behaviors. **Prerequisite**: None, **Co-requisite**: None

SSC200 U. S. GOVERNMENT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Introduces students to the American constitutional system, parties, elections, media, interest groups, branches of government, and public policy issues. Comparison with California constitution and institutions. **Prerequisite**: ENG100, **Co-requisite**: None

SSC210 INTRODUCTION TO CONSCIOUSNESS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Conceptual and experiential investigation of theories of consciousness. Consideration of theories drawn from psychology, neuroscience and philosophical traditions. Topics include defining "consciousness", theories of the self, the evolution of consciousness, the neural correlates of consciousness, altered states of consciousness, paranormal experiences and consciousness

contemplating itself. Exercises and experiments to accompany reading and discussion. **Prerequisite**: ENG100, **Co-requisite**: None

SSC240 MICROECONOMICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Course focuses primarily on microeconomics, such as how people choose, the nature of markets and market failures, and alternative government policies to deal with failure. Topics include opportunity cost, supply, demand, markets, price controls, and market failures. In this course, the economic way of thinking will be applied in order to better understand a market economy **Prerequisite**: ENG100, **Co-requisite**: None

SSC332 GLOBAL POLITICAL ECONOMICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Based on political, economic, and geopolitical study of contemporary processes of globalization. Comparative analysis of various economic and political systems. New realities of the transitional economic systems. Current economic and social development of West Europe, Russia and Eurasia, China, the Middle East, Latin America, and Africa in context of global economic, cultural, military, and political relations with the United States. **Prerequisite**: ENG100, **Co-requisite**: None

SSC399ST SPECIAL TOPIC

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Advanced course on a special topic in social sciences. May be used as a technical elective and repeated as topic changes. **Prerequisite**: None, **Co-requisite**: None

SSC400 TOPICS IN INTERNATIONAL STUDIES

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Provides students with an introduction to the issues, history, perspectives, and analytical methods in the field of Global Political Economy (GPE). This course creates a conceptual landscape of the global political economy, to grasp some big trends and processes and movements related to it. This is a "big picture" course that serves as an introduction to the fields of International Economics and Political Science. **Prerequisite**: ENG100, **Co-requisite**: None

SSC498 SPECIAL PROJECT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
0	0	0	**0**

Individual or group research and development on a special area of interest in social sciences. Topics are developed in consultation with a faculty advisor. **Prerequisite**: None, **Co-requisite**: None

SWE100 INTRODUCTION TO SCRIPTING: PYTHON

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

This class is a practical introduction to programming, using Python. Topics include declarative and imperative knowledge ("what" vs. "how"), problem breakdowns, and examples of declarative and imperative systems of computation. Students will implement several small programming projects in areas chosen by the class. By the end of the course, students will be able to implement their own programming projects, either independently or in collaboration with others. **Prerequisite**: None, **Co-requisite**: None

SWE105 SCRIPTING FOR CG

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Introduction to workflow automation technologies for digital artists. Overview of Linux. Navigating a Linux shell. Standard file system organization. Editors. Scripting. Regular expressions. Introduction to PERL. Revision control. Server farms. Lab assignments will be progressive, with each assignment building on previous work. This course does not fulfill any requirement for the Engineering degree programs. **Prerequisite**: None, **Co-requisite**: None

SWE110 C PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Introduction to hardware and software tools. CPU, memory, disks and files. Program development flow. Introduction to C programming: lexical elements, operators, fundamental data types, flow of controls, functions, recursions, arrays, pointers, strings, bit-wise operators, structures, unions, file manipulation. Students learn structured programming paradigm. **Prerequisite**: MATH115 OR MATH116, **Co-requisite**: None

SWE115 WEB PROGRAMMING: HTML5

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Code HTML5, CSS3 and JavaScript API's to create interactive web pages for mobile, tablet and desktop browsers. Includes FTP, basic design principles, accessibility mandates and search engine optimization. The JavaScript API's would possibly include things like Geolocation and Canvas drawing/animation. In this course HTML and Java Script (and CSS) will be hand-coded to gain bottom-up understanding of the tools and environment. **Prerequisite**: None, **Co-requisite**: None

SWE120 FLASH PROGRAMMING: ACTIONSCRIPT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Animation and ActionScript programming to create interactive animations, applications and games. First covered are basic digital animation concepts such as tween, masking, frame-by-frame and key-frame animation. Action Script is introduced initially in time-line context. Using AS code to control movement on stage and timeline for simple game applications. Using AS to load external content such as text, images, and sound. Finally, publishing to the web and mobile devices. **Prerequisite**: None, **Co-requisite**: None

SWE125 INTRODUCTION TO MOBILE PROGRAMMING: IOS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Mobile is everywhere, and programming for mobile devices has specific characteristics that put it apart from traditional setting. Small displays, small code footprint, adherence to View-Control-Model architecture, availability on different platforms, use of location-aware services and other sensors, and so forth. This course will involve hands-on application implementation for mobile platform. We will focus on native programming (using Objective C) on iOS platforms. **Prerequisite**: None, **Co-requisite**: None

SWE212 JAVA PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Primitive types. Strings. Classes. Objects. Methods. References. Polymorphisms. Inheritance. Exception handling. Streams and file I/O. Arrays. Vectors. Applets and Introduction to threaded programming. Students are introduced to the object oriented paradigm. **Prerequisite**: SWE110, **Co-requisite**: None

SWE221 LINUX PROGRAMMING ENVIRONMENT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Structure of UNIX/LINUX file systems. Shell programming. Discuss different shells. Filters. UNIX/LINUX system calls. Documentation Preparation. Standard I/O Library. AWK programming language. SED editor. Students practice programming in the UNIX/LINUX environment. **Prerequisite**: SWE110, **Co-requisite**: None

SWE310 DATA STRUCTURES AND ALGORITHMS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Data Structures: Stacks. Queues. Linked lists. Circular linked lists. Double linked lists. Circular double linked lists. Binary search trees. Searching and sorting algorithms. Introduction to graph algorithms. Huffman codes, AVL trees. Hashing. B-trees. Students practice concepts of structured programming and discrete mathematical concepts in data structures and analysis of algorithms. **Prerequisite**: SWE110 OR SWE315, **Co-requisite**: None

SWE315 C++ PROGRAMMING: OBJECT ORIENTED PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Non-object oriented features of C++. Constructors and Destructors. Type Coversions. Friends. Overloading functions and operators. References. Polymorphisms. I/O streams. Multiple Inheritances. Templates. Memory Management. Students practice the object oriented paradigm. **Prerequisite**: SWE100 OR SWE110 OR SWE212, **Co-requisite**: None

SWE320 OPERATING SYSTEMS CONCEPTS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

General Multitasking operating system. Scheduling Algorithms. Deadlocks. Concurrency problems and solutions. Process management. Thread management. Disk management. Memory management. Virtual memory. File system organization. Security. Students learn how UNIX, LINUX, and Windows operating systmes are designed. Students practice data structures in operating system design. **Prerequisite**: SWE221 AND SWE310, **Co-requisite**: None

SWE330 COMPILER DESIGN

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours

4	45	30	**75**

Lexical Analysis. Parsing techniques. Semantics analysis. Run time environments. Introduction to code generation and optimization. Students apply discrete mathematical concepts and data structures in complier theory. **Prerequisite**: (SWE221 AND SWE310) OR (SWE315 AND SWE351), **Co-requisite**: None

SWE340 SOFTWARE ENGINEERING METHODS AND PROJECT 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

The software life cycle. Software development methods top-down and bottom-up. Reusability and portability. Documentation development: analysis, specification, design, implementation, testing, operational documents. Inspection walk-through and design review. Students practice project management through software life cycle. Object oriented analysis and design. Managing complexity with abstraction. **Prerequisite**: SWE315, **Co-requisite**: None

SWE341 OBJECT ORIENTED ANALYSIS AND DESIGN

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Object oriented analysis. Object oriented software design in C++/Java. Objects. Classes. Inheritance. Polymorphism. Managing compkexity with Abstraction. Liskov principle. Object modeling. Case studies of object oriented design. Memory management. Exception handling. Some design patterns. Students apply object oriented analysis, design, programming techniques to complete a software project. **Prerequisite**: SWE315, **Co-requisite**: None

SWE351 COMPUTER ARCHITECTURE

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Introduction to generic computer architecture. The Processing Units; ALU, CPU. Instruction cycle behavior and sequencer. Microprogrammed Control. Main Memory. Memory Management. I/O subsystem, disk controller. A complete simple computer design. Computer Arithmetic Algorithms. Principles of pipelining. Discuss CISC and RISC Architectures. **Prerequisite**: SWE310, **Co-requisite**: None

SWE352 EMBEDDED SOFTWARE SYSTEMS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Technologies used in the design and implementation of embedded systmes. Introduction to software tools such as compilers, schedulers, code generators, and system-level design tools. Introduction to computer organization: CPU, I/O, Memory. INTEL/MIPS Assembly language. Linking C and Assembly Language. **Prerequisite**: SWE110 AND MATH143, **Co-requisite**: None

SWE355 INTRODUCTION TO USER ANALYTICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

This class will cover how to understand target customers and users by collecting and analyzing consumer data from social media and other sources. Emphasis will be placed on using appropriate tools, along with developing attitudinal segmentation and user personas as well as testing concepts with consumers. Students will survey methods such as web scraping, text analytics and cluster analysis as they relate to understanding consumer behavior. **Prerequisite**: MATH115 OR MATH116, **Co-requisite**: None

SWE360 DATABASE MANAGEMENT SYSTEMS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

File Organization. Indexing techniques. Data models. Query Languages. B-trees, B*-trees, B+-trees. Study design and implementation of a relational database. Students apply concepts from data structures and compiler design in database management. **Prerequisite**: SWE315, **Co-requisite**: None

SWE372 SCRIPTING LANGUAGES

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

This course discusses multiple scripting langauges, and emphasizes similarities and differences between them. Some of the languages used are Lua, Perl, JavaScript and Python as scripting languages. Applications of scripting languages in data structures and algorithms, animation and games. **Prerequisite**: SWE110 OR SWE100, **Co-requisite**: None

SWE375 MOBILE PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Mobile is everywhere, and programming for mobile devices has specific characteristics that put it apart from traditional setting. Small displays, small code footprint, adherence to View-Control-Model architecture, availability on different platforms, use of location-aware services and other sensors, and so forth. This course will involve hands-on application implementation for mobile platform. **Prerequisite**: SWE212 OR SWE315, **Co-requisite**: None

SWE419 CONCURRENT PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Threads. Semaphores. Monitors. Message passing. Rendezvous. RMI. Remote procedure calls, distributed or network programming, and parallel processing. This course emphasizes on thread implementations. **Prerequisite**: SWE320, **Co-requisite**: None

SWE420 UNIX/LINUX INTERNALS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Introduction to UNIX/LINUX kernel. Designs and Algorithms of Buffer Cache, File Systems, UNIX/LINUX Systems Calls, Processes, Memory Management System. UNIX Scheduling algorithms. Students apply operating systems concepts in UNIX/LINUX systems and study the efficiency of UNIX/LINUX systems. **Prerequisite**: SWE221 AND SWE320, **Co-requisite**: None

SWE422 FOUNDATIONS OF COMPUTER NETWORKS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Network Communication: Internal Structure, Interfaces, Routing, Buffering, and Congestion Control, Sockets. Network Protocols. TCP algorithms. **Prerequisite**: SWE320 AND SWE315, **Co-requisite**: None

SWE424 ROUTING AND SWITCHING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

LAN and WAN protocols. LAN and WAN design issues. IP routing. IP Multicast. Frame relay. Router token ring. ATM routing and switching. **Prerequisite**: SWE422, **Co-requisite**: None

SWE426 NETWORK SECURITY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Security protocols. Security technologies: Concepts-Firewalls, Content Filters, Public Key Infrastructure (PKI), Authentication Technologies, Authorization technologies, Virtual Private Networks (VPN), Networking IDS anomaly, signature, passive, inline. Host Intrusion Prevention Cisco Threat Response. Routing and switching security features: IE mac address controls, port security, dhcp snoop. **Prerequisite**: SWE422, **Co-requisite**: None

SWE430 ADVANCED JAVA

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Java Threaded Programming. Collection. Networking. Database Connectivity. Remote Objects. Swing. Security. Internationalization. Naive Methods **Prerequisite**: (SWE212 AND SWE341), **Co-requisite**: None

SWE432 WEB PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

HTML, XHTML. Servlets. Java threads to Java beans. Introduction to JSP. Non-Java related technologies for web development such as Perl, PHP and Javasript. **Prerequisite**: SWE212, **Co-requisite**: None

SWE442 SOFTWARE ENGINEERING METHODS AND PROJECTS 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Case Studies of Object Oriented Analysis and Design. Design Patterns. Component architecture. Component frameworks. Students apply object oriented principles in a large project. **Prerequisite**: SWE340, **Co-requisite**: None

SWE445 ADVANCED C++ PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Multiple Inheritance. Virtual base class. Virtual functions. Smart pointers. Run time type information. Template Meta Programming. Generic Programming. Concurrency in C++. Applications to game engine. **Prerequisite**: SWE310 AND SWE315, **Co-requisite**: None

SWE447 GUI AND GRAPHICS PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Principles of user interface design. Input elements: keyboard, mouse. Memory management. Icons. Menus. Dialog boxes. Graphics device interface. OpenGL. Transformations. Bresenham's Lines and Circles Algorithms. Ellipses. Hidden line Algorithms. Clipping Algorithms. Spline curves. Bezier curve. B-splines surface and Bezier surfaces. Hidden lines and surfaces algorithms. Hidden line and surface removal methods. Students learn GUI and practice concrete mathematics concepts in computer graphics. **Prerequisite**: SWE315, **Co-requisite**: None

SWE449 TOOLS PROGRAMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Advance Scripting. Mel Scripting. C++ Plug-in. **Prerequisite**: SWE315, **Co-requisite**: None

SWE451 ANIMATION PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Sprite Animation. Frame Animation. Theory and Practice of anti-aliasing techniques. Rendering techniques: Shadow algorithms, Texture mapping. Volume rendering. Visualization techniques. Global illumination. Motion control. Students apply computer graphics in animation. **Prerequisite**: SWE447, **Co-requisite**: None

SWE461 COMPUTER SECURITY

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Computers are the basic components of networks, and are often the entry point to those. Moreover, these end points are directly accessed by human users, and therefore are most prone to security breaches. In this course we will discuss various security risks in computers, various methods for exploiting these, and ways to protect against those. From simple Viruses transferred by files, to security holes in web browsers and network programs, to user unauthorized access, security issues

will be addressed in the context of access control, security models, identification and authentication, cryptography, and more. **Prerequisite**: SWE310, **Co-requisite**: None

SWE472 AI GAME PROGRAMMING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Study the design and implementation of computer games like chess, checkers and others. Combinatorial games. Students learn AI techniques for games and apply concrete mathematics and animation techniques to games. **Prerequisite**: SWE310, **Co-requisite**: SWE 450

SWE473 GAME ENGINE 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Study the design and implementation of a game engine. Modify existing game engine. Design a game engine. Students apply computer graphics, AI and animation techniques in a game engine. **Prerequisite**: SWE451, **Co-requisite**: SWE 472

SWE474 GAME ENGINE 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
4	45	30	**75**

Implementation part of a game engine. Students apply computer graphics, AI and animation techniques in game engines. **Prerequisite**: SWE473, **Co-requisite**: None

SWE475 MOBILE PROGRAMMING GRAPHICS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	30	30	**60**

Graphics is at the core of many applications, and is the outward facing aspect of the application. The Graphics Mobile Programming course is designed to teach students how to program graphics using OpenGL from writing basic graphic shapes to the use of shaders and 3d effects. Learn how to program the graphics pipeline using shaders, add colors, shading, 3D projections, touch interaction, and more. Advanced effects involving particles, lighting models, and the depth buffer, debugging your program, and what to watch out for when deploying to the market will also be covered. **Prerequisite**: SWE375, **Co-requisite**: None

SWE484 SENIOR PROJECT 1: PLANNING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Selecting a relevant problem or task to address in this project. Building the project plan, acquiring the knowledge needed for the specific task, and possibly generating a few 'proof-of-concept' cases to demonstrate the viability of the suggested solution. At the conclusion of this phase the project should have a clear written product specifications, engineering specifications, and a project plan. **Prerequisite**: College Level=Senior, **Co-requisite**: None

SWE485 SENIOR PROJECT 2: EXECUTION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	15	60	**75**

Implementing the project plan, and delivering a working solution. Being a real-world project, this involves iterative refinement process of the approach to solution, and tradeoffs according to constraints. In addition, this part will emphasize the proper documentation of the whole project, and will combine parts from the previous session with a full description of the solution and the process. **Prerequisite**: SWE484, **Co-requisite**: None

Graduate Course Descriptions

ENT520 BUSINESS MODELS & PLANNING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Key components of a business model – value proposition, customer segments, cost structure, etc.; using the Business Model Canvas and associated lean startup techniques to better understand and build a business. **Prerequisite**: None, **Co-requisite**: None

ENT525 LEGAL STRUCTURES, CONTRACTS & RISK MANAGEMENT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

The basics of contracts, legal structures, liability & risk management and intellectual property. Contract evaluation and the key components of standard contracts; legal structures including their impact on liability and taxation; copyrights, trademarks and patents as it pertains to entrepreneurs and new business start-ups. **Prerequisite**: None, **Co-requisite**: None

ENT530 FINANCE & ACCOUNTING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Key aspects of financial statements and accounting methods for the launch, growth and management of a new venture are covered. Material provides an understanding of how to measure, analyze and manage the new venture through key metrics. Financial statements, accounting methods and operational assessments are topics of focus. **Prerequisite**: None, **Co-requisite**: None

ENT535 ENTREPRENEURIAL MARKETING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

The basic foundations and processes of marketing, beginning with the Four P's of marketing. Examines the full range of marketing strategies and techniques for new products and services, including (but not limited to) channels, partnerships, basics of online marketing, marketing automation concepts and tools, and the basics of social media as a marketing tool. **Prerequisite**: None, **Co-requisite**: None

ENT540 SALES & NEGOTIATIONS

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Course examines the full range of entrepreneurial sales strategies and techniques. Students practice various negotiations, including cross-cultural negotiation and negotiating via information technology. Uses cases, role-plays, and simulations for hands-on practice to develop skills in dealing with real situations. **Prerequisite**: None, **Co-requisite**: None

ENT545 CREATIVITY & INNOVATION

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Topics and exercises around enhancing creativity, ideation, and inspiring innovation. Techniques to enhance creativity and innovation are applied to situations to develop new business concepts and to

evaluate market potential. Project management principles are presented that can be used to design and launch new ideas. **Prerequisite**: None, **Co-requisite**: None

ENT550 SOCIAL MEDIA & ONLINE MARKETING

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Students will study how to tie social media efforts to an organization's overall strategy, different social media platforms, the relationship between website, search, content and social media, and typical metrics across social and search. Topics include: how content and conversations are shifting between new and old media; analysis of how organizations are using social media effectively (or ineffectively); social media missteps and how to avoid them; and how social media can be measured. **Prerequisite**: None, **Co-requisite**: None

ENT555 LEADERSHIP & MANAGEMENT

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	45	0	**45**

Effective communication, team building, leadership, management, networking, and goal setting are studied and applied. Feedback through evaluative techniques and survey instruments are used to provide tools for techniques and strategies that lead to self-awareness and improvement on the job. Role-playing, exercises, presentations, and assessment instruments are used. **Prerequisite**: None, **Co-requisite**: None

ENT590 PRACTICUM 1

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	0	135	**135**

The practicum is the program capstone independent project. With mentoring, students will address a specific business challenge; research a new opportunity; pivot an existing idea; or apply the knowledge and skills they have learned in the program. Practicums are a minimum of 6 weeks full-time, or equivalent, including preparatory work. Success in the practicum is determined by the ability to deliver on the goal, create a comprehensive business plan or, if the idea is determined not to be feasible, to demonstrate why on a deep level. **Prerequisite**: None, **Co-requisite**: None

ENT595 PRACTICUM 2

Semester Credits	Lecture Hours	Lab Hours	Total Contact Hours
3	0	135	**135**

The practicum is the Masters program capstone project. With mentoring, students will address a business challenge; research a new direction or a new opportunity; move to a new level or to a different market; or apply the knowledge and skills they have learned otherwise to develop or improve some aspect of their venture. Practicums are a minimum of 6 weeks full-time, or equivalent, including preparatory work. Success in the practicum is determined by the ability to delivery on the goal, or, if not successful, to demonstrate that they understand why on a deep level. **Prerequisite**: ENT590, **Co-requisite**: None