# Table of Contents

## General Information
- Catalog Version 4

## College of Computing and Digital Media (CDM)
- About the College 5
- Administration 5
- Student Services 5
- Facilities 6
- Admission 6
- Academic Advisement 6
- Professional Development 7
- Transfer Credit 8
- Grades and Credit Hours Requirements 8
- Minors 8

## Programs in CDM
- Current Degree Descriptions 17

## School of Computing (SoC)
- About the School of Computing 18
- Faculty 18
- Liberal Studies Program and Modern Language Option 22
- CDM Liberal Studies Courses 22
- Combined Bachelor/Master Degrees 31
- Minors 33

### Bachelor of Arts Degree Programs
- Computing (Joint with SNL) 40
- Information Technology 41

### Bachelor of Science Degree Programs
- Computer Games Development (Joint with CIM) 44
- Computer Graphics and Motion Technology (Joint with CIM) 48
- Computer Science 54
- Information Assurance and Security Engineering 63
- Information Systems 65
- Information Technology 70
- Interactive Media (Joint with CIM) 73
- Mathematics / Computer Science (Joint with LA&S) 75
- Network Technologies 80

## School of Cinema and Interactive Media (CIM)
- About the School of Cinema and Interactive Media 88
- Faculty 88
- Liberal Studies Program and Modern Language Option 90
- CDM Liberal Studies Courses 90
- Combined Bachelor/Master Degrees 99
- Minors 101

### Bachelor of Arts Degree Programs
- Animation 108
- Digital Cinema 111
## Bachelor of Science Degree Programs

- Animation 120
- Computer Games Development (Joint with SoC) 126
- Computer Graphics and Motion Technology (Joint with SoC) 130
- Digital Cinema 136
- Interactive Media (Joint with SoC) 139

## Bachelor of Fine Arts Degree Programs

- Graphic Design 141

## Special Programs

- Minors 145
- Professional Development 152
- Combined Bachelor/Master Degrees 154

## Courses

- Courses 156
General Information

Catalog Version

**Undergraduate Update: October 15, 2011**

Please use the menu items to the left for current catalog navigation. Access archived catalogs by choosing the link to the right.
College of Computing and Digital Media (CDM)

About the College

DePaul's College of Computing and Digital Media (CDM) is organized into two schools: the School of Computing (SoC) and the School of Cinema and Interactive Media (CIM) featuring 16 degree programs designed to keep pace with the latest developments in technology while remaining grounded in the liberal arts and sciences. As one of the largest IT programs in the nation, DePaul CDM has a reputation for offering an extraordinary selection of degree programs and courses from traditional computer science, information systems, and network technologies to game development, digital cinema, animation, and our newest undergraduate program in graphic design. At CDM, students will experience a dynamic interdisciplinary curriculum and the opportunity to explore their academic curiosity through 24 minor concentrations that reflect the diverse offerings of CDM's majors.

Administration

DAVID MILLER, PH.D.
Dean
LUCIA DETTORI, PH.D.
Associate Dean
MARTIN KALIN, PH.D.
Associate Dean
LIZ FRIEDMAN, PH.D.
Assistant Dean of Student Services

Student Services

Assistant Dean of Student Services
LIZ FRIEDMAN, PH.D.

Advising Staff

JOHN GLATZ
Director of Advising

BECKY KROCHMAL
Assistant Director of Advising

JIGBIE AGUIRRE
Academic Advisor

SHANNNON RESOWSKI
Academic Advisor

Undergraduate Admissions
Facilities

DePaul University maintains an extensive technological infrastructure which is available for students, faculty and staff. In addition, many schools and departments maintain their own resources dedicated for use by their own constituents.

The College of CDM itself operates specialized laboratories in the following:

- Requirements Engineering Lab
- Mobile Commerce Lab
- Solid Objects and Graphics Lab
- Animation Lab
- Network Security Lab
- Game Development Lab
- Console Gaming Lab
- Digital Cinema Advanced Editing Lab
- High Definition Editing Suite
- Medical Informatics Lab
- Digital Cinema Studio
- Usability Testing Lab
- Intelligent Multimedia Processing Lab
- Supercomputing Cluster Lab
- Software Research Lab
- Multimedia Networking Lab
- Centre for Web Intelligence
- E-Commerce Technology Lab

More information on Labs and Resources at CDM.

Admission

Undergraduate Admission to the College of Computing and Digital Media

Candidates interested in admission to the College of Computing and Digital Media should direct all inquiries to the Office of Admission, DePaul University, 1 E. Jackson Boulevard, Chicago, Illinois, 60604, admission@depaul.edu, or (312) 362-8300.

For general information on the types of admission, see University Information, Admission.

Academic Advisement

The College believes that academic advising is necessary for the vitality and success of the student's
undergraduate education. Students are assigned a faculty advisor upon admission to the school. All students are encouraged to meet with their faculty advisor at least once each year for assistance in planning a course of study that best reflects their academic and career interests, skills, and lifestyle.

**Professional Development**

The College of Computing and Digital Media established the Institute for Professional Development in 1985 to offer certificate programs designed to meet the needs of both individuals and businesses in the Chicagoland area. These non-degree offerings provide intensive training in a wide variety of areas, with each standalone certificate program addressing a different set of theoretical concepts and practical skills. Emphasis is placed on gaining practical experience through a combination of lectures and demonstrations complemented by laboratory exercises and homework assignments. Certificate programs are typically taught by a team of instructors, that includes both full-time faculty and part-time instructors from industry. The programs require a substantial commitment of time, as most meet two nights per week and in the morning on approximately half of the Saturdays during the program.

For application and registration information pertaining to the certificate programs offered by the Institute for Professional Development, please call the Institute office at (312) 362-6282.

Current certificate program offerings include:

**IPD 354 Cloud Computing Infrastructure and Operations Program**
A 6-week program in the architectures, infrastructure, and operations of Cloud Computing

**IPD 355 Cloud Computing Fundamentals Program**
An 11-week program in the principles, methods, and technologies of Cloud Computing

**IPD 356 Web Development with Ajax Technologies Program**
A 7-week program covering Web development with Ajax technologies

**IPD 357 Wireless LAN Security Program**
An 8-week program covering the latest solutions in wireless LAN security

**IPD 358 SharePoint Developer Program**
A 10-week comprehensive program covering Microsoft SharePoint development

**IPD 359 Web Development with Python Program**
A 5-week program covering Web development with the Python programming language.

**IPD 360/460 SQL Server Business Intelligence Program**
An 11-week in-depth program covering SQL Server analysis services, integration services, and reporting services

**IPD 363 SQL Server Database Administration Program**
An 11-week in-depth program covering database administration using SQL Server

**IPD 364 Lightweight Java Web Development Program**
An 8-week comprehensive program covering open-source, lightweight Java enterprise Web development using POJOs (Plain Old Java Objects)

**IPD 365 Ruby on Rails Program**
A 8-week in-depth program covering Web development using Ruby on Rails

**IPD 366 Java Web Services Program**
A 7-week concentrated program covering service-oriented architecture and the development of Web services using Java

**IPD 370 Advanced SQL Program**
Transfer Credit

Prospective students may transfer credit from an accredited college to DePaul University. All transfer credit will be initially evaluated by an Admission counselor; final course placement will be made by an academic advisor in the College of Computing and Digital Media (CDM). For specific information governing transfer admission and evaluation of credit, please consult the DePaul University Undergraduate Transfer webpage. Current CDM students may take courses at another accredited college either in the summer or during the regular school year and transfer the credit back to DePaul University only with prior approval from the student's academic advisor.

Grades and Credit Hours Requirements

Grades

Students must earn grades of C or above in all courses taken for credit in the major field. Grades of C- may be accepted for major field credit provided the overall grade point average within the major is 2.0 or above. All other courses require grades of D or better.

Credit Hours

All students must complete a minimum of 192 quarter hours of college credit.

Minors

A minor is a combination of courses that provides a cohesive introduction to an area of study. Typically, courses taken to satisfy minor field requirements are credited as open electives; however, there are some instances where minor field courses may be used for credit in other areas of the student’s curriculum. Grades for all courses, taken to fulfill a minor field requirement must be 'C' or above. Grades of 'C-' may be accepted for credit in the minor provided the minor GPA is 2.0 or above. A minimum of one-half of the courses required for a minor must be completed at DePaul University.

MINORS IN THE COLLEGE OF COMMERCE

Students enrolled in the College of Computing and Digital Media (CDM) may obtain a minor in Accounting, Business Administration, E-Business, Economics, Management, MIS, Marketing, and Pre-MBA. Please see the
MINORS IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Students enrolled in the College of Computing and Digital Media (CDM) may obtain a minor through the College of Liberal Arts and Sciences. Most Liberal Arts and Science departments offer minor concentrations of study. In general, a minor in a Liberal Arts and Sciences discipline consists of a set of introductory courses plus another set of more specialized courses. Most minors require six courses, some of which may also be used for credit in the Liberal Studies Program. For a complete list of minors offered through the College of Liberal Arts and Sciences, please consult that section of this online Bulletin.

MINORS IN THE COLLEGE OF COMPUTING AND DIGITAL MEDIA

Computer technology is an omnipresent part of our world, used in academic disciplines from physics to history to geography. CDM offers several minors that will appeal to all DePaul University students.

Political science and geography majors can pursue a minor in Data Analysis, Databases, or Data Visualization, which is important to understanding how to analyze census or GPS data.

Communications majors may be interested in Digital Cinema which will give you skills in creating videos for advertising.

Art majors interested in a career in graphics programming, animation or design may be interested in CDM's tech-focused minors in Animation or Computer Graphics Software Development.

An academic foundation in E-Commerce Technology, Networks or Information Systems can give Commerce students an edge in a tough job market.

There are other examples too numerous to mention. So if you have questions or want advice on what minor is best for you, can email our CDM Undergraduate Services team: gocdm@cdm.depaul.edu or call them at: 312-362-8714.

Policies for Academic Minors

Students must:

1. earn at least a grade of C- in each minor course and a GPA of no less than 2.0 for all courses in the minor;
2. earn at least a cumulative GPA of 2.0 for all courses applied to the minor;
3. not select the pass/fail option for courses in the minor;
4. meet the following residency requirement: no more than 50% of the requirements of a minor may be fulfilled by transfer credits, AP credit, IB credit of CLEP credit.

Finally, students cannot earn a minor in their major program. Courses required to fulfill a minor are determined by the unit in which the minor resides.

CDM Minors for CDM Students

To obtain a minor in CDM when the major is also in CDM:

1. Satisfy all requirements for the major
2. Satisfy all requirements for the minor
3. Students must take at least 6 courses in the minor area that do not count towards their CDM major

Note: If you have already taken some of the courses listed under your minor on this page, work with your advisor to choose other courses within the same program area, ie. NT minor would look under NT major courses and Computer Graphics Software Development would look under Computer Graphics Courses, in order to have 6 distinct courses.

- Animation Minor
- Computer Graphics Software Development
- Computer Science
- Data Analysis and Data Mining
- Database
- Data Visualization Development
- Digital Cinema
- E-Commerce Technology
- Game Design
- Game Programming
- Graphic Design
- Information and Computing in the Modern World
- Interactive Media
- Information Systems
- Information Technology
- Network Technologies
- Screenwriting
- Security
- Security in the Electronic World
- Software Engineering
- Sound Design
- Television Production Minor
- Visual Computing
- Visual Effects

**CDM Minor Requirements**

**Animation Minor**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>or ANI 201</td>
<td>Animation I</td>
</tr>
<tr>
<td>ANI 230</td>
<td>3D Design &amp; Modeling</td>
</tr>
<tr>
<td>ANI 231</td>
<td>3D Animation</td>
</tr>
<tr>
<td>ANI 206</td>
<td>History of Animation</td>
</tr>
</tbody>
</table>

3 courses from the following list: (at least 1 must be ANI)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 201</td>
<td>Introduction to Screenwriting</td>
</tr>
<tr>
<td>DC 210</td>
<td>Digital Cinema Production I</td>
</tr>
<tr>
<td>DC 220</td>
<td>Editing I</td>
</tr>
</tbody>
</table>

Any ANI course

**Computer Graphics Software Development Minor**

**Liberal Studies**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPH 211</td>
<td>Perceptual Principles for Digital Environments I</td>
</tr>
<tr>
<td>or GD 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>GPH 212</td>
<td>Perceptual Principles for Digital Environments II</td>
</tr>
</tbody>
</table>

**Course Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 261</td>
<td>Programming Languages I: C/C++</td>
</tr>
<tr>
<td>CSC 262</td>
<td>Programming Languages II: C/C++</td>
</tr>
<tr>
<td>CSC 393</td>
<td>Data Structures in C++</td>
</tr>
<tr>
<td>GPH 329</td>
<td>Computer Graphics Development II</td>
</tr>
<tr>
<td>GPH 339</td>
<td>Advanced Rendering Techniques</td>
</tr>
<tr>
<td>GPH 372</td>
<td>Principles of Computer Animation</td>
</tr>
</tbody>
</table>

**Computer Science Minor**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 241</td>
<td>Introduction to Computer Science I</td>
</tr>
<tr>
<td>and CSC 242</td>
<td>Introduction to Computer Science II</td>
</tr>
<tr>
<td>and CSC 224</td>
<td>Java for Programmers</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>and CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>and CSC 309</td>
<td>Object-Oriented Programming in C++</td>
</tr>
</tbody>
</table>
CSC 261 Programming Languages I: C/C++
and CSC 262 Programming Languages II: C/C++
and CSC 224 Java for Programmers
CSC 393 Data Structures in C++
or CSC 383 Data Structures and Algorithms in Java
MAT 140 Discrete Mathematics I
CSC 373 Computer Systems I
CSC 374 Computer Systems II

Data Analysis and Data Mining Minor

IT 240 Introduction to Desktop Databases
IT 223 Data Analysis
CSC 324 Data Analysis and Statistical Software II
CSC 367 Introduction to Data Mining
CSC 334 Advanced Data Analysis
2 CDM Electives

Database Minor

CSC 211 Programming in Java I
and CSC 212 Programming in Java II
IT 223 Data Analysis
IT 240 Introduction to Desktop Databases
CSC 352 Database Programming
CSC 367 Introduction to Data Mining
1 CDM Elective

Data Visualization Development Minor

Liberal Studies

GPH 211 Perceptual Principles for Digital Environments I
GPH 212 Perceptual Principles for Digital Environments II

Course Requirements

CSC 261 Programming Languages I: C/C++
CSC 262 Programming Languages II: C/C++
CSC 323 Data Analysis
CSC 393 Data Structures in C++
GPH 329 Computer Graphics Development II
GPH 372 Principles of Computer Animation
GPH 380 Visualization

Digital Cinema Minor

DC 205 Foundations of Cinema
DC 225 Digital Still Photography
DC 201 Introduction to Screenwriting
DC 220 Editing I
3 courses from the following list:
ANI 101 Animation for Non-Majors
DC 210 Digital Cinema Production I
DC 270 Topics in Digital Cinema
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 215</td>
<td>Digital Sound Design</td>
</tr>
<tr>
<td>DC 275</td>
<td>Cinematography</td>
</tr>
<tr>
<td>DC 310</td>
<td>Digital Cinema Production II</td>
</tr>
<tr>
<td>DC 320</td>
<td>Editing II</td>
</tr>
<tr>
<td>DC 389</td>
<td>The Big Picture: The Entertainment Industry</td>
</tr>
</tbody>
</table>

### E-Commerce Technology Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>IT 230</td>
<td>Building Internet Applications</td>
</tr>
<tr>
<td>ECT 330</td>
<td>Advanced Internet Application Development</td>
</tr>
<tr>
<td>IM 210</td>
<td>Introduction to Human-Computer Interaction</td>
</tr>
</tbody>
</table>

1 course from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECT 355</td>
<td>Internet Systems: Collaboration, Commerce, and Media</td>
</tr>
<tr>
<td>ECT 360</td>
<td>Introduction to XML</td>
</tr>
<tr>
<td>ECT 365</td>
<td>Web Server Operations</td>
</tr>
</tbody>
</table>

### Game Design Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 201</td>
<td>Introduction to Screenwriting</td>
</tr>
<tr>
<td>ANI 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>or ANI 201</td>
<td>Animation I</td>
</tr>
<tr>
<td>ANI 230</td>
<td>3D Design &amp; Modeling</td>
</tr>
<tr>
<td>GAM 224</td>
<td>Introduction to Game Design</td>
</tr>
<tr>
<td>or GAM 226</td>
<td>Game Design for Majors</td>
</tr>
<tr>
<td>GAM 244</td>
<td>Game Development I</td>
</tr>
<tr>
<td>GAM 245</td>
<td>Game Development II</td>
</tr>
</tbody>
</table>

### Game Programming Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAM 224</td>
<td>Introduction to Game Design</td>
</tr>
<tr>
<td>or GAM 226</td>
<td>Game Design for Majors</td>
</tr>
<tr>
<td>GAM 244</td>
<td>Game Development I</td>
</tr>
<tr>
<td>GAM 245</td>
<td>Game Development II</td>
</tr>
<tr>
<td>GAM 374</td>
<td>Action Games Programming</td>
</tr>
</tbody>
</table>

2 courses from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 230</td>
<td>3D Design &amp; Modeling</td>
</tr>
<tr>
<td>GPH 321</td>
<td>Computer Graphics Development I</td>
</tr>
<tr>
<td>GPH 329</td>
<td>Computer Graphics Development II</td>
</tr>
<tr>
<td>GPH 350</td>
<td>Digital Modeling II</td>
</tr>
</tbody>
</table>

Any other 300-Level GAM or GPH course

### Graphic Design Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>GD 200</td>
<td>Graphic Design I</td>
</tr>
<tr>
<td>GD 300</td>
<td>Graphic Design II</td>
</tr>
<tr>
<td>GD 230</td>
<td>Typography</td>
</tr>
</tbody>
</table>

3 courses from the following list and/or any GD course (at least 1 must be GD):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>ANI 201</td>
<td>Animation I</td>
</tr>
</tbody>
</table>
ANI 230  3d Design and Modeling
ANI 260  Motion Graphics
ANI 360  Advanced Motion Graphics
DC 125  Digital Still Photography for Non-Majors
DC 220  Editing I
DC 225  Digital Still Photography
DC 321  Production Design
DC 376  Visual Design
IM 220  Interactive Media I
IM 222  Information Visualization
IM 320  Interactive Media II
IM 270  User-Centered Web Design
IT 130  The Internet and the Web

2 of the following courses may substitute for 1 course:
GD 350  Portfolio Workshop
GD 150  Illustrator Workshop
GD 151  Photoshop Workshop
GD 152  Digital Typography Workshop

**Information and Computing in the Modern World Minor**

ECT 350  Internet, Commerce and Society
HCI 201  Multimedia and the World Wide Web
IT 201  Introduction to Information Systems
IT 215  Analysis and Design Techniques
CSC 223  The Impact of Computing Technology on Our Lives
or IT 228  Ethics in Computer Games and Cinema
or CSC 208  The Computer and Social Responsibility
or IS 208  Information Technology, Economy and Society
IS 356  Knowledge Management Systems
or IS 374  Management Support Systems
or IT 398  Topics in Global Information Technology

**Interactive Media Minor**

**Required Courses**

HCI 201  Multimedia and the World Wide Web
or IT 130  The Internet and the Web
IM 210  Introduction to Human-Computer Interaction
GD 105  Intro to Visual Design
or GPH 211  Perceptual Principles for Digital Environments
IM 220  Interactive Media I
IM 270  User-centered Web Design

2 courses from the following list:
IM 222  Information Visualization
IM 208  Virtual Worlds and Online Communities
IM 230  Scripting for Interactive Media
IM 320  Interactive Media II
IM 330  Advanced Scripting for Interactive Media
IT 231  Web Development I
IM 320  Interactive Media II

**Information Systems Minor**
IT 240  Introduction to Desktop Databases  
IT 201  Introduction to Information Systems  
IT 215  Analysis and Design Techniques  
IS 372  Fundamentals of Software Project Management  
IS 373  Introduction to Large Systems Implementation  

**Information Technology Minor**

IT 130  The Internet and the Web  
IT 231  Web Development I  
IT 240  Introduction to Desktop Databases  
IT 263  Applied Networks and Security  
or TDC 261  Basic Communication Systems  
IT 215  Analysis and Design Techniques  
1 CDM Elective

**Network Technology Minor**

CSC 211  Programming in Java I  
or CSC 261  Programming Languages I: C/C++  
CSC 212  Programming in Java II  
or CSC 262  Programming Language II: C/C++  
IT 201  Introduction to Information Systems  
IT 263  Applied Networks and Security  
TDC 362  Principles of Data Communication  
TDC 363  Introduction to Local Area Networks  
TDC 365  Network Interconnection Technologies

**Screenwriting Minor**

DC 201  Introduction to Screenwriting  
DC 222  Classic Hollywood Film Structure  
DC 301  Advanced Screenwriting I  
DC 302  Advanced Screenwriting II  
DC 303  Advanced Screenwriting III  
DC 304  Topics in Screenwriting

**Security Minor**

CSC 211  Programming in Java I  
and CSC 212  Programming in Java II  
or CSC 261  Programming Language I: C/C++  
and CSC 262  Programming Language II: C/C++  
CSC 233  Codes and Cyphers  
or CSC 333  Cryptology  
CNS 378  Host and Information Security  
CNS 320  Computer Forensic and Incident Response  
CNS 228  Legal, Ethical and Social Issues in Information Security  
CNS 340  Fundamentals of Information Assurance

**Security in the Electronic World Minor**

IT 130  The Internet and the Web
and IT 231 Web Development I
and IT 232 Web Development II
or
CSC 261 Programming Language I: C/C++
and CSC 262 Programming Language II: C/C++
or
CSC 241 Introduction to Computer Science I
and CSC 242 Introduction to Computer Science II
or
CSC 211 Programming in Java I
and CSC 212 Programming in Java II
CNS 228 Legal, Ethical and Society Issues in Information Security
CSC 233 Codes and Ciphers
CNS 320 Computer Forensic and Incident Response
CNS 340 Fundamentals of Information Assurance

Software Engineering Minor

CSC 261 Programming Languages I: C/C++
and CSC 262 Programming Languages II: C/C++
and CSC 224 Java for Programmers
or
CSC 241 Introduction to Computer Science I
and CSC 242 Introduction to Computer Science II
and CSC 224 Java for Programmers
or
CSC 211 Programming in Java I
CSC 212 Programming in Java II
and then
CSC 383 Data Structures and Algorithms in Java
SE 325 Principles and Practices of Software Engineering
SE 330 Object-Oriented Modeling
SE 350 Object-Oriented Software Development

Sound Design Minor

DC 215 Digital Sound Design
DC 312 Music for Film and Video
DC 313 Production Sound
DC 315 Advanced Digital Sound Design
3 courses from the following list
GAM 250 Digital Sound for Computer Games
DC 317 Advanced Sound Mixing for Cinema
DC 318 Advanced Dialogue Recording and Editing
DC 319 Advanced Sound Effects Recording and Editing
DC 313 Sound for Multimedia
DC 203 History of Motion Picture Sound

Television Production Minor

DC 210 Digital Cinema Production I
DC 220 Editing I
DC 271 Introduction to Television Production
DC 272 Writing for Television
Visual Computing Minor

- MAT 140 Discrete Mathematics I
- or MAT 220 Linear Algebra with Applications
- or 1 quarter of Calculus (Prerequisite for CSC 381)
- IT 223 Data Analysis (Prerequisite for CSC 367)
- CSC 381 Introduction to Digital Image Processing
- CSC 382 Applied Image Analysis
- IT 300 Research Experience
- CSC 367 Introduction to Data Mining (IT 223 requirement)

Visual Effects Minor

- ANI 230 3D Design & Modeling
- ANI 379 Advanced 3D Compositing
- DC 220 Editing I
- DC 325 Color Correction
- VFX 200 Introduction to Visual Effects
- VFX 278 Digital Compositing I
- VFX 378 Digital Compositing II
Programs in CDM

Current Degree Descriptions

Bachelor of Science Degree Programs

School of Computing
- Computer Game Development (joint with CIM)
- Computer Graphics and Motion Technology (joint with CIM)
- Computer Science
- Information Assurance and Security Engineering
- Information Systems
- Information Technology
- Interactive Media (joint with CIM)
- Math and Computer Science (joint with LA & S)
- Network Technologies

School of Cinema and Interactive Media
- Animation
- Computer Game Development (joint with SoC)
- Computer Graphics and Motion Technology (joint with SoC)
- Digital Cinema
- Interactive Media (joint with SoC)

Bachelor of Arts Degree Programs

School of Cinema and Interactive Media
- Animation
- Digital Cinema

School of Computing
- Computing (joint with SNL)
- Information Technology

Bachelor of Fine Arts Degree Programs

School of Cinema and Interactive Media
- Graphic Design

Special Programs
- Combined Bachelor/Master Degree Programs
- Professional Development Programs
- Minors
About the School of Computing

The School of Computing (SoC) houses CDM's technical degrees. With an emphasis on the theoretical as well as practical, students can earn degrees that prepare them for work in computing, programming, data storage, information processing, network security, software development, and computer graphics and motion technology.

Faculty

DAVID MILLER, Ph.D.
Dean
University of Chicago

OLAYELE ADELAKUN, Ph.D.
Associate Professor
Turku School of Economics & Business Adm.

ANDRE BERTHIAUME, Ph.D.
Associate Professor
University of Montreal

GIAN MARIO BESANA, Ph.D.
Associate Professor
University of Notre Dame

GREGORY BREWSTER, Ph.D.
Associate Professor
University of Wisconsin, Madison

ROBIN BURKE, Ph.D.
Associate Professor
Northwestern University

SUSY CHAN, Ph.D.
Professor
Syracuse University

I-PING CHU, Ph.D.
Associate Professor
State University of New York at Stony Brook

ANTHONY CHUNG, Ph.D.
Associate Professor
University of Maryland Baltimore County

LUCIA DETTORI, Ph.D.
Associate Professor and Associate Dean
University of Paris XI

MASSIMO DIPIERRO, Ph.D.
Assistant Professor
DEPAUL UNIVERSITY

JEAN-PHILIPPE LABRUYÈRE, M.S.
Instructor
Illinois Institute of Technology

GLENN LANCASTER, Ph.D.
Associate Professor
University of California, Irvine

STEPHEN LUECKING, M.F.A.
Professor
Miami University

EVELYN LULIS, Ph.D.
Associate Professor
Illinois Institute of Technology

STEVEN LYTINEN, Ph.D.
Professor
Yale University

WILFREDO MARRERO, Ph.D.
Associate Professor
Carnegie Mellon University

JOHN MCDONALD, Ph.D.
Associate Professor
Northwestern University

CRAIG MILLER, Ph.D.
Associate Professor
University of Michigan

DANIEL MITTLEMAN, Ph.D.
Associate Professor
The University of Arizona

BAMSHAD MOBASHER, Ph.D.
Professor
Iowa State University

THOMAS MUSCARELLO, Ph.D.
Associate Professor
University of Illinois at Chicago

MAKOTO NAKAYAMA, Ph.D.
Associate Professor
University of California, Los Angeles

LIJUBOMIR PERKOVIC, Ph.D.
Associate Professor
Carnegie Mellon University

CORIN PITCHER, Ph.D.
Associate Professor
University of Oxford

CYNTHIA PUTNAM, Ph.D.
Assistant Professor
University of Washington

DANIELA RAICU, Ph.D.
Associate Professor
Oakland University
JAMES RIELY, Ph.D.
Associate Professor
University of North Carolina at Chapel Hill

JOHN ROGERS, Ph.D.
Associate Professor
University of Chicago

MARCUS SCHAEFER, Ph.D.
Associate Professor
University of Chicago

ERIC SCHWABE, Ph.D.
Associate Professor
Massachusetts Institute of Technology
ERIC SEDGWICK, Ph.D.
Associate Professor
University of Texas

RAFFAELLA SETTIMI, Ph.D.
Associate Professor
University of Perugia

AMBER SETTLE, Ph.D.
Associate Professor
University of Chicago

PAUL SISUL, M.DIV.
Instructor
DeAndreis Institute of Theology
JANINE SPEARS, Ph.D.
Assistant Professor
The Pennsylvania State University

ADAM STEELE, Ph.D.
Associate Professor
Concordia University

THERESA STEINBACH, Ph.D., M.B.A.
Associate Professor
DePaul University

HAROLD STREETER, M.S.
Instructor
Brown University

NORMA SUTCLIFFE, Ph.D.
Associate Professor
University of California at Los Angeles

NORIKO TOMURO, Ph.D.
Associate Professor
DePaul University

CURT WHITE, Ph.D.
Associate Professor
Wayne State University

CHARLES WILCOX, B.A.
Instructor
Southern Illinois University

ROSALIEE WOLFE, Ph.D.
College of Computing and Digital Media - Undergraduate Studies  School of Computing (SoC)  Liberal Studies Program and Modern Language Option

Liberal Studies Program and Modern Language Option

The Liberal Studies Program is the common curriculum taken by all students in the seven undergraduate colleges of DePaul University. Overall, the Program is designed to develop students writing abilities, computational and technological proficiencies, and critical and creative thinking skills.

Each major in the University has unique Liberal Studies requirements.

Please consult the Liberal Studies catalog for your relevant requirements as a CDM student as well as for information about the Modern Language Option.

CDM Liberal Studies Courses

CDM offers dozens of courses in many domains of the Liberal Studies Program. You can experiment with Screenwriting, Digital Photography, Game Design, Computer Graphics and Programming and fulfill a requirement at the same time. Many of these courses also serve as gateway courses into more advanced CDM courses. Courses can be grouped in two lists:

- Liberal Studies Course Offered by CDM
- CDM Liberal Studies Courses Offer by CDM - Grouped by Topic

Click to view Restrictions for CDM Students

Liberal Studies Courses Offered by CDM

This list represents Liberal Studies Program (LSP) courses taught by CDM only. For a complete list of LSP courses, visit the Liberal Studies homepage.

- Arts and Literature
  - **ANI 101 Animation for Non-Majors**
    Course introduces a variety of basic animation techniques for cinema and gaming, such as hand-drawn, cutout, stop-motion and (very basic) 3D, with an emphasis on the use of computer technology.
  - **ANI 206 History of Animation**
    History of Animation: This course is an introduction to the history and development of the field of animation.
  - **DC 113 Audio for Podcasts and Other Media**
    This course is an introduction to the uses and practical applications of sound for multimedia. Students will study various uses of sound and music on the Internet from creative to professional websites. Using free or inexpensive hardware and software, students will learn to create and edit podcasts and attach audio files to programs and web pages such as Facebook, Itunes, Keynote,
Podcasts and attach audio files to programs and web pages such as Facebook, iTunes, Keynote, PowerPoint and other sites. The course will cover both Mac and PC applications so all students will be able to work on projects from their home computers. The course will also cover current legalities of digital media.

- **DC 202 History of Motion Picture Editing**
  This course studies the origins and rise of film editing as an art form, an industry, a set of technological practices ranging from analog film to digital video. The course examines critical historical events that impacted film editing: the emergence of the studio system, the coming of sound, narrative, experimental and documentary film, MTV, and audience shifts. For many, editing is the unique source of the art of filmmaking. This course addresses this question.

- **DC 125 Digital Still Photography for Non-Majors**
  This course is an introduction to the history and aesthetics of still photography and to the concept of photography as a descriptive and interpretive artistic medium. Students studying photographs in this context will discover relationships between individual photographers’ choices and their own understanding of meaning. Students will learn the fundamental concepts necessary to shoot, edit, manipulate, and print digital still photographs.

- **DC 120 Video Editing**
  Students analyze and assemble dramatic scenes under a variety of conditions and narrative strategies. Editing theories, techniques, and procedures, issues of continuity, effects, movement and sound are examined as they relate to the fundamentals of cinematic montage and visual storytelling. This class presents a variety of topics and experiences that are designed to broaden the student’s understanding of the art of cinematic storytelling and montage. Work on more advanced projects is integrated into the class as a means to an understanding of advanced editing tools and techniques.

- **DC 201 Introduction to Screenwriting**
  This course focuses on narrative storytelling and encourages students to find their unique voices, while emphasizing the critical importance of working as part of a creative team.

- **DC 205 Foundations of Cinema**

- **DC 207 History of Cinema I, 1890-1945**
  This course examines the history of cinema as one of the most influential cultural forms of the 20th Century. We will study the aesthetic and technological developments of cinema during its first 50 years, as well as examine the social and economic factors shaping its history. Initially influenced by the other art forms (theater, literature, painting), filmmaking quickly acquired its own formal system, language, and traditions. We will trace the changing styles, techniques, content, and methods of filmmaking as an art form as popular culture, and as an industry. We will consider how cinema is bound to its social context via audience relations, economics, technology, and ideology. The limited scope of this course will cover primarily feature-length, narrative films as the dominant mode of filmmaking, although we will also look at the development of documentary and experimental filmmaking. The class will consist of lectures, screenings, and discussions.

- **DC 208 History of American Cinema, 1946-1975**
  From Film Noir to Hitchcock, an examination of post war Hollywood, film noir, wide screen and epic films, the development of the star system, the director as auteur, and the influence of international film movements and directors. Screenings, lecture, and discussion.

- **DC 209 History of Cinema, 1975-Present**
  This final course in the film history sequence is designed to introduce students to a sense of modern film history and the multiple permutations of cinema around the modern film history and the multiple permutations of cinema around the globe. It presents film history from a global perspective, concentrating primarily on the development of new national and transnational cinemas. The course continues to chart the development of the American studios since the mid-1970s while examining the effects of media consolidation and convergence. Moreover, the course seeks to examine how global cinemas have reacted to and dealt with the formal influence and economic domination of Hollywood filmmaking on international audiences. Class lectures, screenings, and discussions will consider how cinema has changed from a primarily national phenomenon to a transnational form of communication in the 21st century.

- **DC 222 Story Structure in Cinema**
  This course focuses on the critical analysis of narrative structure in Cinema. Students will learn how to identify key story concepts and break down three act structure in finished films and scripts.

- **DC 233 Cinema & Art**
  This course will provide an overview of avant-garde film, video, animation and installation, and
the relationship of these cinematic forms to Modern and Contemporary art.

- **DC 250 Working with Actors 1**
  This course is an introduction and examination of the collaborative process between the actor and director. Methods of study include lecture, discussion, assignments, and in-class acting exercises.

- **GAM 224 Introduction to Game Design**
  Students will learn about a game's "hook", its "high concept" and the crucial needs of marketing for a successful game design. Students will also learn to design a game's component pieces.

- **GD 200 Graphic Design I**
  This course introduces the world of graphic design in a social and historical context. The goals are to explore formal structures and research methods with emphasis on the role of analysis and conceptual thinking as the first tasks of the print and multi-media designer. The course includes basic instruction in typography, color, problem-solving in print and on screen.

- **GD 220 History of Design I**
  The history of graphic design is an evolution in aesthetics, technology, style and visual communication. The class will encompass a survey of the major movements in the field of print design, notable designers and design materials. The nature of changing methods, materials, technologies and values are examined in the context of the social and political realities that shape communication. The course will include the historical shift from print to multimedia design methodologies.

- **GPH 211 Perceptual Principles for Digital Environments I**
  An introduction to the visual, non-verbal principles incorporated in the effective presentation of on-screen environments. This course emphasizes the use of two-dimensional elements and their organization.

- **GPH 212 Perceptual Principles for Digital Environments II**
  Further experience with the visual, non-verbal principles incorporated in effective presentation of on-screen environments. This course emphasizes the use of three dimensional elements, spaces and their organization.

- **GPH 213 Perceptual Principles for Digital Environments III**
  These three foundational courses in computer animation take you through the process of creating 2-D and 3-D representations on the computer. The last course teaches you how to animate them!

- **Junior Experiential Learning Credit**
  - **CSC 298 Internship**
    Computer Science Internship in cooperation with local employers this course offers students the opportunity to integrate their academic experience with on-the-job training in computer related work areas.
  - **CSC 378 Software Projects for Community Clients**
  - **CSC 379 Technology Partnerships in Urban Schools**
    Students in this course will have the opportunity to assess urban community needs in the technology arena and develop skills in assisting and developing methods for bridging the digital divide that exists.
  - **DC 298 Internship in Media Production/Post-Production**
    This course offers students an excellent opportunity to gain professional experience, industry contacts, and referrals while still in school. Opportunities in post-production, motion picture production, advertising, television, animation, motion graphics and interactive media. Admission to the program requires consent of internship course instructor. Current work experience plus classroom time is required. Supervisor evaluation will contribute to the final grade.
  - **DC 380 Project Bluelight**
    Production of a feature-length digital motion picture written by students or faculty within the Digital Cinema program.
  - **GD 380 Design for Client and Community**
    This course enables students to work from start to finish on client-based graphic design and projects. Students establish working relationships as individuals and in teams that utilize their skills to effectively evaluate the communication needs of an organization or business, develop design solutions that fulfill those needs, and negotiate the process between designers and clients.
  - **GPH 360 Modeling Spaces**
    The digital design and modeling of environmental spaces with attention to human use parameters.
  - **IT 300 Research Experience**
    This course involves the exploration of a research topic under the supervision of a research advisor.
- **IT 398 Topics in Global Information Technology**
  This course focuses on current topics in the information and communications technologies that together support the "networked world." Sample topics are global software development and deployment, global data and information management, and cross-cultural project management for information systems. The course may be offered for variable credit hours (2, 4, 8, 16, and 32).

- **Scientific Inquiry**
  - **CSC 200 Survey of Computing**
    Learn about careers using computers and pick up some skills to help you manage your own PC or network!
  - **CSC 211 Programming in Java I**
    **CSC 212 Programming in Java II**
    Two courses in programming JAVA, a cross-platform, web-enabled language.
  - **CSC 233 Codes and Ciphers**
    A history of code making and breaking and the math and (computer) science behind it
  - **CSC 235 Problem Solving**
    How do you solve a problem? In this course we discuss different problem solving techniques and strategies such as modeling, establishing subgoals, and searching and pruning.
  - **CSC 239 Personal Computing**
    You will learn how to use Excel to analyze data and how to publish data and retrieve it from the World Wide Web.
  - **CSC 250 Computers and Human Intelligence**
    Students taking this course will study human problem-solving and its simulation by computers. Artificial intelligence, pattern recognition and learning programs will be discussed.
  - **CSC 255 Information Structures and Representations**
    Students learn about data representation, machine architecture concepts, algorithms, data structures including arrays, stacks, linked lists, trees.
  - **CSC 261 Programming in C++ I**
  - **CSC 262 Programming in C++ II**
    Two courses in programming C++
  - **ECT 250 Internet, Commerce, and Society**
    Ever shop online? Learn the basics behind how these kinds of web sites function
  - **HCI 201 Multimedia and the World Wide Web**
    Overview of the Web, its origins and capabilities. Create your own sample web page.
  - **IM 222 Information Visualization**
    This course discusses the basic problems and techniques of visualizing quantitative and qualitative data.
  - **IT 130 The Internet and the Web**
    Learn to design your own web site!
  - **IT 223 The Internet and the Web**
    Application of statistical concepts and techniques to a variety of problems in IT areas and other disciplines, using a statistical package for simple data analysis.
  - **IT 236 User Interface Development**
    The focus of the course is to build interfaces to simple programs. The course will cover interface controls, event handling, and the use of built in and/or pre-written controls. The course will cover simple database access through a Database control and possibly access to WebServices such as Google. Good visual design principles will be emphasized throughout the course.
  - **IT 240 Introduction to Desktop Databases**
    Learn introductory concepts in constructing databases and networking files.
  - **IT 263 Applied Networks and Security**
  - **TDC 261 Basic Communication Systems**
    Learn about how networks work and how they impact your daily life.

- **Scientific Inquiry: Lab**
  - **DC 274 Image, Optics and Cinematic Motion**
    Cinematography is the scientifically-grounded discipline of making lighting and camera choices in order to record moving images. This course deals with the basic mathematics, physics, and photochemistry that underlie cinematography and that motivate camera design and construction. A student who masters the foundations of cinematography through a mixture of lectures, readings, exercises, and labs will be able to evaluate and understand how motion-based recording
choices affect perception of moving images they see every day.

- **GPH 259 Design Geometry  (cross-listed as ART 295)**
  Learn the basics of Computer Aided Design.

- **Self, Society, and the Modern World**
  - **CSC 223 The Impact of Computing Technology On Our Lives**
    This course will introduce students to an overview of social analysis techniques and the theories of social change.
  - **DC 105 Digital Media Literacies**
    This course is designed to help students develop an informed, critical and practical understanding of new communication media, including ways to read, write and produce in a digital environment.
  - **DC 235 Adaptation: The Cinematic Recrafting of Meaning**
    This course explores contemporary cinematic adaptations of literature and how recent reworkings in film open viewers up to critical analysis of the cultural practices surrounding the promotion and reception of these narratives.
  - **GAM 208 or IM 208 Virtual Worlds and Online Communities**
    Environments such as social networking sites, multiplayer online games and other online communities are becoming an increasingly large part of how we work, plan, and learn. This course introduces the fundamentals for the interdisciplinary study of cyberculture and online social behavior. By examining core scholarship in this area, together with analyzing an existing virtual world, game, or online community, students will learn to research and understand new technologically-enabled social forms as they are emerging.
  - **IS 208 IT, Economy and Society**
    This course broadly surveys the history of IT applications and information systems from the historical perspective, and critically assesses the digital impact on industry, the economy, workers, citizens, social class and the future.
  - **IT 201 Introduction to Information Systems**
    This course examines how various types of computer-based information systems form a critical part of modern organizations, how they work, and how they impact workers, organizations and the economy.

- **Understanding the Past**
  - **GAM 206 History of Games**
    This class will examine particular games and game genres in their historical context using a case study format.
  - **GPH 205 Historical Foundations of Visual Technology**
    This course is a survey of the development, application and meaning of visual technologies in a wide range of world cultures from pre-history to the present.

- **Philosophical Inquiry**
  - **CSC 208 Ethics in Technology**
    This course will research the impact technology has had in various areas of our lives, the new responsibilities technology presents, and our ability to deal with these changes in an ethical manner.
  - **DC 227 Film Philosophy**
    This course is a seminar on the philosophical analysis of film art, with an emphasis on the ways in which it creates meaning through techniques that define a formal structure. There is a particular focus on aesthetic problems about appearance and reality, literacy and visual effects, communication and alienation through film technology.
  - **DC 228 or GAM 228 or IT 228 Ethics in Computer Games and Cinema**
    Societies function based on normative ethics utilizing common sense to distinguish between ethical and unethical behavior. Most of us are not aware of the underlying theories when arriving at ethical judgments about right and wrong. However, the fast pace of progress in information technologies and digital entertainment creates an environment, in which ethical challenges are particularly complex. In the eyes of many, games and movies are violent, offensive and immoral. This course will concentrate on analyzing the impact of digital entertainment on an individual and society. Implications of certain values embedded in games and movies will be discussed. Elements of the ethical code of conduct for a game or movie creator will be formulated. The issue of balancing individual creativity vs. cultural impact, particularly on children, will be discussed.
CDM Liberal Studies Courses Offered by CDM - Grouped by Topic

- **The Internet and How It Works**
  - **CSC 200** Survey of Computing: Scientific Inquiry: Elective
    Learn about Careers using computers and pick up some skills to help you manage your own PC or network!
  - **CSC 211** Programming in Java I: Scientific Inquiry: Elective  
    **CSC 212** Programming in Java II: Scientific Inquiry: Elective
    Two courses in programming JAVA, a cross-platform, web-enabled language.
  - **CSC 255** Information Structures and Representations
    Students learn about data representation, machine architecture concepts, algorithms, data structures including arrays, stacks, linked lists, trees.
  - **CSC 261** Programming in C++ I  
  - **CSC 262** Programming in C++ II
    Two courses in programming C++.
  - **ECT 250** Internet, Commerce, and Society: Scientific Inquiry: Elective
    Ever shop at Gap.com? Learn the basic behind how these kinds of web sites function.
  - **HCI 201** Multimedia and the World Wide Web: Scientific Inquiry: Quantitative
    Overview of the Web, its origins and capabilities. Create your own sample web page.
  - **IT 130** The Internet and the Web
    Learn to Design Your Own Website
  - **IT 263** Applied Networks and Security
    The focus of the course is to build interfaces to simple programs. The course will cover interface controls, event handling, and the use of built in and/or pre-written controls. The course will cover simple database access through a Database control and possibly access to WebServices such as Google. Good visual design principles will be emphasized throughout the course.
  - **TDC 261** Basic Communication Systems
    Introduction to voice, data, and multi-media network communications fundamentals. Wired, Wireless, and Optical applications in Local, Metropolitan, Wide Area Networks are explored. The overview explains how technical, regulatory, competitive, standardization and cultural factors impact modern network applications.

- **The Computer and Society**
  - **CSC 208** Ethics in Technology
    This course will research the impact technology has had in various areas of our lives, the new responsibilities technology presents, and our ability to deal with these changes in an ethical manner.
    This course will introduce students to an overview of social analysis techniques and the theories of social change.
  - **CSC 250** Computers and Human Intelligence
    Students taking this course will study human problem-solving and its simulation by computers. Artificial intelligence, pattern recognition and learning programs will be discussed.
  - **GAM 208 or IM 208** Virtual Worlds and Online Communities
    Environments such as social networking sites, multiplayer online games and other online communities are becoming an increasingly large part of how we work, plan, and learn. This course introduces the fundamentals for the interdisciplinary study of cyberculture and online social behavior. By examining core scholarship in this area, together with analyzing an existing virtual world, game, or online community, students will learn to research and understand new technologically-enabled social forms as they are emerging.
  - **IS 208 IT** Economy and Society
    This course broadly surveys the history of IT applications and information systems from the historical perspective, and critically assesses the digital impact on industry, the economy, workers, citizens, social class and the future.
  - **IT 201** Introduction to Information Systems
    This course examines how various types of computer-based information systems form a critical part of modern organizations, how they work, and how they impact workers, organizations and the economy.
  - **DC 228 or GAM 228 or IT 228** Ethics in Computer Games and Cinema
Societies function based on normative ethics utilizing common sense to distinguish between ethical and unethical behavior. Most of us are not aware of the underlying theories when arriving at ethical judgments about right and wrong. However, the fast pace of progress in information technologies and digital entertainment creates an environment, in which ethical challenges are particularly complex. In the eyes of many, games and movies are violent, offensive and immoral. This course will concentrate on analyzing the impact of digital entertainment on an individual and society. Implications of certain values embedded in games and movies will be discussed. Elements of the ethical code of conduct for a game or movie creator will be formulated. The issue of balancing individual creativity vs. cultural impact, particularly on children, will be discussed.

- **Computer Graphics and Motion Technology**
  - ANI 101 *Animation for Non-Majors*
    Course introduces a variety of basic animation techniques for cinema and gaming, such as hand-drawn, cutout, stop-motion and (very basic) 3D, with an emphasis on the use of computer technology
  - ANI 206 *History of Animation*
    History of Animation: This course is an introduction to the history and development of the field of animation
  - GPH 205 *Historical Foundations of Visual Technology*
    This course is a survey of the development, application and meaning of visual technologies in a wide range of world cultures from pre-history to the present.
  - GPH 211 *Perceptual Principles for Digital Environments I*: Arts and Literature
    An introduction to the visual, non-verbal principles incorporated in the effective presentation of on-screen environments. This course emphasizes the use of two-dimensional elements and their organization.
  - GPH 212 *Perceptual Principles for Digital Environments II*: Arts and Literature
    Further experience with the visual, non-verbal principles incorporated in effective presentation of on-screen environments. This course emphasizes the use of three dimensional elements, spaces and their organization
  - GPH 213 *Perceptual Principles for Digital Environments III*: Arts and Literature
    These three foundational courses in computer animation take you through the process of creating 2-D and 3-D representations on the computer. The last course teaches you how to animate them.
  - GPH 259 *Design Geometry* (cross-listed as ART 295)
    Learn the basics of Computer Aided Design.
  - GPH 360 *Modeling Spaces*
    The digital design and modeling of environmental spaces with attention to human use parameters

- **Data Analysis and Retrieval**
  - CSC 235 *Problem Solving*
    How do you solve a problem? In this course we discuss different problem solving techniques and strategies such as modeling, establishing subgoals, and searching and pruning.
  - CSC 239 *Personal Computing: Scientific Inquiry: Quantitative*
    You will learn how to use Excel to analyze data and how to publish data and retrieve it from the World Wide Web.
  - IT 223 *Data Analysis* Application of statistical concepts and techniques to a variety of problems in IT areas and other disciplines, using a statistical package for simple data analysis.
  - IT 240 *Introduction to Desktop Databases: Personal Computing for Programmers: Scientific Inquiry: Elective*
    Learn introductory concepts in constructing databases and networking files.
  - HCI 201 *Multimedia and the World Wide Web: Scientific Inquiry: Quantitative*
    Overview of the Web, its origins and capabilities. Create your own sample web page.
  - ECT 250 *Internet, Commerce, and Society: Scientific Inquiry: Elective*
    Ever shop at Gap.com? Learn the basic behind how these kinds of web sites function.
  - IT 130 *The Internet and the Web (formerly ECT 270): Scientific Inquiry: Elective*
    Learn to design your own complex web site!

- **Codes, Ciphers and Computer Intelligence**
  - CSC 233 *Codes and Ciphers*: Scientific Inquiry: Elective
    A history of code making and breaking and the math and (computer) science behind it
CSC 250 Computers and Human Intelligence: Scientific Inquiry: Quantitative
Study how computers are designed to think like people

Digital Cinema and Game Development

ANI 101 Animation for Non-Majors
Course introduces a variety of basic animation techniques for cinema and gaming, such as hand-drawn, cutout, stop-motion and (very basic) 3D, with an emphasis on the use of computer technology.

ANI 206 History of Animation
History of Animation: This course is an introduction to the history and development of the field of animation.

DC 105 Digital Media Literacies
This course is designed to help students develop an informed, critical and practical understanding of new communication media, including ways to read, write and produce in a digital environment.

DC 113 Audio for Podcasts and Other Media
This course is an introduction to the uses and practical applications of sound for multimedia. Students will study various uses of sound and music on the Internet from creative to professional websites. Using free or inexpensive hardware and software, students will learn to create and edit podcasts and attach audio files to programs and web pages such as Facebook, Itunes, Keynote, PowerPoint and other sites. The course will cover both Mac and PC applications so all students will be able to work on projects from their home computers. The course will also cover current legalities of digital media.

DC 120 Video Editing
Students analyze and assemble dramatic scenes under a variety of conditions and narrative strategies. Editing theories, techniques, and procedures, issues of continuity, effects, movement and sound are examined as they relate to the fundamentals of cinematic montage and visual storytelling. This class present a variety of topics and experiences that are designed to broaden the student's understanding of the art of cinematic storytelling and montage. Work on more advanced projects is integrated into the class as a means to an understanding of advanced editing tools and techniques.

DC 125 Digital Still Photography for Non-Majors
This course is an introduction to the history and aesthetics of still photography and to the concept of photography as a descriptive and interpretive artistic medium. Students studying photographs in this context will discover relationships between individual photographers choices and their own understanding of meaning. Students will learn the fundamental concepts necessary to shoot, edit, manipulate, and print digital still photographs.

DC 201 Introduction to Screenwriting
This course focuses on narrative storytelling and encourages students to find their unique voices, while emphasizing the critical importance of working as part of a creative team.

DC 202 History of Motion Picture Editing
This course studies the origins and rise of film editing as an art form, an industry, a set of technological practices ranging from analog film to digital video. The course examines critical historical events that impacted film editing: the emergence of the studio system, the coming of sound, narrative, experimental and documentary film, MTV, and audience shifts. For many, editing is the unique source of the art of filmmaking. This course addresses this question.

DC 205 Foundations of Cinema

DC 207 History of Cinema I, 1890-1945
This course examines the history of cinema as one of the most influential cultural forms of the 20th Century. We will study the aesthetic and technological developments of cinema during its first 50 years, as well as examine the social and economic factors shaping its history. Initially influenced by the other art forms (theater, literature, painting, filmmaking quickly acquired its own formal system, language, and traditions. We will trace the changing styles, techniques, content, and methods of filmmaking as an art form as popular culture, and as an industry. We will consider how cinema is bound to its social context via audience relations, economics, technology, and ideology. The limited scope of this course will cover primarily feature-length, narrative films as the dominant mode of filmmaking, although we will also look at the development of documentary and experimental filmmaking. The class will consist of lectures, screenings, and discussions.

DC 208 History of American Cinema, 1946-1975
From Film Noir to Hitchcock, an examination of post war Hollywood, film noir, wide screen and epic films, the development of the star system, the director as autuer, and the influence of international film movements and directors. Screenings, lecture, and discussion.

**DC 209 History of Cinema, 1946-Present**
This final course in the film history sequence is designed to introduce students to a sense of modern film history and the multiple permutations of cinema around the modern film history and the multiple permutations of cinema around the globe. It presents film history from a global perspective, concentrating primarily on the development of new national and transnational cinemas. The course continues to chart the development of the American studios since the mid-1970s while examining the effects of media consolidation and convergence. Moreover, the course seeks to examine how global cinemas have reacted to and dealt with the formal influence and economic domination of Hollywood filmmaking on international audiences. Class lectures, screenings, and discussions will consider how cinema has changed from a primarily national phenomenon to a transnational form of communication in the 21st century.

**DC 222 Story Structure in Cinema**
This course focuses on the critical analysis of narrative structure in Cinema. Students will learn how to identify key story concepts and break down three act structure in finished films and scripts.

**DC 227 Film Philosophy**
This course is a seminar on the philosophical analysis of film art, with an emphasis on the ways in which it creates meaning through techniques that define a formal structure. There is a particular focus on aesthetic problems about appearance and reality, literacy and visual effects, communication and alienation through film technology.

**DC 233 Cinema & Art**
This course will provide an overview of avant-garde film, video, animation and installation, and the relationship of these cinematic forms to Modern and Contemporary art.

**DC 235 Adaptation: The Cinematic Recrafting of Meaning**
This course explores contemporary cinematic adaptations of literature and how recent re-workings in film open viewers up to critical analysis of the cultural practices surrounding the promotion and reception of these narratives.

**DC 250 Working with Actors 1**
This course is an introduction and examination of the collaborative process between the actor and director. Methods of study include lecture, discussion, assignments, and in-class acting exercises.

**DC 274 Image, Optics and Cinematic Motion**
Cinematography is the scientifically-grounded discipline of making lighting and camera choices in order to record moving images. This course deals with the basic mathematics, physics, and photochemistry that underlie cinematography and that motivate camera design and construction. A student who masters the foundations of cinematography through a mixture of lectures, readings, exercises, and labs will be able to evaluate and understand how motion-based recording choices affect perception of moving images they see every day.

**GAM 206 History of Games**
This class will examine particular games and game genres in their historical context using a case study format.

**GAM 224 Introduction to Game Design**
Students will learn about a game’s “hook”, its “high concept” and the crucial needs of marketing for a successful game design. Students will also learn to design a game’s component pieces.

**Graphic Design**

**GD 200 Graphic Design I**
This course introduces the world of graphic design in a social and historical context. The goals are to explore formal structures and research methods with emphasis on the role of analysis and conceptual thinking as the first tasks of the print and multi-media designer. The course includes basic instruction in typography, color, problem-solving in print and on screen.

**GD 220 History of Design I**
The history of graphic design is an evolution in aesthetics, technology, style and visual communication. The class will encompass a survey of the major movements in the field of print design, notable designers and design materials. The nature of changing methods, materials, technologies and values are examined in the context of the social and political realities that shape communication. The course will include the historical shift from print to multimedia design methodologies.

**GD 380 Design for Client and Community**
This course enables students to work from start to finish on client-based graphic design and
This course enables students to work from start to finish on client-based graphic design and projects. Students establish working relationships as individuals and in teams that utilize their skills to effectively evaluate the communication needs of an organization or business, develop design solutions that fulfill those needs, and negotiate the process between designers and clients.

- **Visualization**
  - IM 222 Information Visualization
    This course discusses the basic problems and techniques of visualizing quantitative and qualitative data.

**Restrictions for CDM Students**

A CDM student can take any CDM course approved for liberal studies credit and use it to satisfy a domain of the liberal studies program (LSP) provided the course is NOT required as part of the student's major.

A CDM student can not count a course as a liberal studies requirement and a major requirement. No double counting is allowed for CDM classes by CDM students.

**Example 1**

- A CGMT student cannot use GPH 211 to satisfy the arts and literature requirement of LSP, as GPH 211 is required by all CGMT tracks.
- An ECT major CAN take GPH 211 to satisfy the arts and literature requirement of the LSP. The course qualifies for a liberal studies program domain that is required by the student's major.

**Example 2**

- A CS student CAN take GPH 259 to satisfy the Scientific Inquiry (SI)-Quantitative-Lab requirement of LSP because the course is not required by the CS major AND it counts for SI-Lab which is a required domain for CS students.
- A CS student CANNOT take CSC 250 to satisfy SI because, although the course is not required by any or our programs, it qualifies for SI-quantitative (not Lab) which is NOT a required domain for CDM students.

**Example 3**

- A CS student takes GPH 211 for arts and literature LSP. Although GPH 211 is allowed as an elective even if it is not a 300 level course, the student CANNOT count the course both as satisfying an LSP domain AND as an elective for the CS program.

---

**Combined Bachelor/Master Degrees**

Academically gifted students may choose to enroll in the combined degree program. This dual degree program allows students to combine any CDM bachelor's degree with any CDM master's degree, except the joint MA/JD and joint MS/JD degree programs, following the structure outlined below.

**Program Structure**

Students in the combined degree program take a maximum of three graduate level courses that count toward both their bachelor's and master's degree requirements. Students may enroll in graduate level coursework in the junior and senior year only. Students in the combined degree program will receive the bachelor's degree after meeting all graduation requirements including the standard 192 undergraduate credit hours. The
After meeting all graduation requirements including the standard 192 undergraduate credit hours, the master's degree is awarded after the student completes 10 additional graduate courses (40 credit hours), instead of the standard 13 courses (52 credit hours).

**Admission Criteria**

- Minimum of 6 courses (24 credit hours) completed at DePaul
- GPA of 3.3 or higher in courses taken at DePaul
- Endorsement of faculty advisor

In order to apply for the BS/MS combined degree program, your faculty advisor must send an e-mail recommendation to Becky Krochmal. The recommendation should include your full name, student ID number, and the BS and MS degrees you wish to apply for.

Bachelor of Arts in Computing students who are enrolled via the School for New Learning are eligible for this program. Interested students who meet the admission criteria for a combined degree should contact Kenn Skorupa at SNL or Becky Krochmal at CDM for more information.

**Maintaining Good Standing**

- Each student's cumulative GPA and course grades will be reviewed after each Autumn, Winter, and Spring Quarter
- The student and Faculty Advisor will be notified when the student's cumulative GPA falls below 3.3 or when the student receives less than a C- in graduate level course.
- If a student's cumulative GPA falls below 3.3, the student must earn a term GPA of 3.3 or above in the following quarter to stay active. If the student does not achieve a 3.3 term GPA, then the student will be dismissed from the combined program and resume the traditional BA/BS. As long as the student's cumulative GPA is below 3.3, the student must continue to achieve at least a 3.3 term GPA in all following quarters or face dismissal. If, at any point, the student's cumulative GPA is once again 3.3 or higher, term requirements no longer apply.
- If a student does not maintain good standing, they will be dismissed from the Combined Degree and returned to normal undergraduate degree seeking status. Any graduate courses passed before dismissal will not be counted toward graduate credit and may not be retaken (if the student does pursue graduate study, other graduate courses must be substituted). If dismissed students wish to apply to a CDM graduate degree program, they may do so following normal CDM Admission procedures, but will still be required to take 13 graduate courses for a MS degree.

**Bachelor's Degree to Master's Degree Transition**

After completing the undergraduate degree, when the student is ready to begin the graduate degree, the student should email Becky Krochmal who will process the change of status.

If, upon completion of the bachelor's degree, the student did not meet all prerequisites for the master's degree, then the student will need to complete (course, test or waiver) the missing prerequisites for the chosen master's Degree. If, while still in the undergraduate degree phase, the student receives less than a C- in graduate level course, the course cannot count towards the MS/MA Degree.

**Designing a Course of Study**

It is extremely important that the student and faculty advisor work together on a course of study immediately upon admission to the Combined Degree Program.

This course of study may include which undergraduate classes to avoid taking in order to take the graduate version. Failure to put together a solid plan can lead to extra coursework and a lengthening of the Combined Degree program.

It is advisable for the student and advisor to enter the proposed plan of study in the student communication record on the CDM intranet so it is available to the student and CDM faculty and staff.

**Registering for Master's Degree Courses**

Starting in Fall 2010, students will be enrolled in the graduate class instead of the special "Combined Degree Course". The student's advisor must email Associate Dean Lucia Dettori requesting the enrollment. The following information should be included in the email: student's full name, DePaul ID, graduate course and section, and the undergraduate course to be substituted for. Student services will process the enrollment.
Minors

A minor is a combination of courses that provides a cohesive introduction to an area of study. Typically, courses taken to satisfy minor field requirements are credited as open electives; however, there are some instances where minor field courses may be used for credit in other areas of the student's curriculum. Grades for all courses, taken to fulfill a minor field requirement must be 'C' or above. Grades of 'C-' may be accepted for credit in the minor provided the minor GPA is 2.0 or above. A minimum of one-half of the courses required for a minor must be completed at DePaul University.

MINORS IN THE COLLEGE OF COMMERCE

Students enrolled in the College of Computing and Digital Media (CDM) may obtain a minor in Accounting, Business Administration, E-Business, Economics, Management, MIS, Marketing, and Pre-MBA. Please see the College of Commerce Section for Minor Requirements.

MINORS IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Students enrolled in the College of Computing and Digital Media (CDM) may obtain a minor through the College of Liberal Arts and Sciences. Most Liberal Arts and Science departments offer minor concentrations of study. In general, a minor in a Liberal Arts and Sciences discipline consists of a set of introductory courses plus another set of more specialized courses. Most minors require six courses, some of which may also be used for credit in the Liberal Studies Program. For a complete list of minors offered through the College of Liberal Arts and Sciences, please consult that section of this online Bulletin.

MINORS IN THE COLLEGE OF COMPUTING AND DIGITAL MEDIA

Computer technology is an omnipresent part of our world, used in academic disciplines from physics to history to geography. CDM offers several minors that will appeal to all DePaul University students.

Political science and geography majors can pursue a minor in Data Analysis, Databases, or Data Visualization, which is important to understanding how to analyze census or GPS data.

Communications majors may be interested in Digital Cinema which will give you skills in creating videos for advertising.

Art majors interested in a career in graphics programming, animation or design may be interested in CDM's tech-focused minors in Animation or Computer Graphics Software Development.

An academic foundation in E-Commerce Technology, Networks or Information Systems can give Commerce students an edge in a tough job market.

There are other examples too numerous to mention. So if you have questions or want advice on what minor is best for you, can email our CDM Undergraduate Services team: gocdm@cdm.depaul.edu or call them at: 312-362-8714.

Policies for Academic Minors

Students must:

1. earn at least a grade of C- in each minor course and a GPA of no less than 2.0 for all courses in the minor;
2. earn at least a cumulative GPA of 2.0 for all courses applied to the minor;
3. not select the pass/fail option for courses in the minor
4. meet the following residency requirement: no more than 50% of the requirements of a minor may be fulfilled by transfer credits, AP credit, IB credit of CLEP credit.

Finally, students cannot earn a minor in their major program. Courses required to fulfill a minor are determined by the unit in which the minor resides.

CDM Minors for CDM Students
To obtain a minor in CDM when the major is also in CDM:

1. Satisfy all requirements for the major
2. Satisfy all requirements for the minor
3. Students must take at least 6 courses in the minor area that do not count towards their CDM major

**Note:** If you have already taken some of the courses listed under your minor on this page, work with your advisor to choose other courses within the same program area, i.e. NT minor would look under NT major courses and Computer Graphics Software Development would look under Computer Graphics Courses, in order to have 6 distinct courses.

- Animation Minor
- Computer Graphics Software Development
- Computer Science
- Data Analysis and Data Mining
- Database
- Data Visualization Development
- Digital Cinema
- E-Commerce Technology
- Game Design
- Game Programming
- Graphic Design
- Information and Computing in the Modern World
- Interactive Media
- Information Systems
- Information Technology
- Network Technologies
- Screenwriting
- Security
- Security in the Electronic World
- Software Engineering
- Sound Design
- Television Production Minor
- Visual Computing
- Visual Effects

**CDM Minor Requirements**

**Animation Minor**

AN1 101 Animation for Non-Majors

or AN1 201 Animation I

AN1 230 3D Design & Modeling

AN1 231 3D Animation

AN1 206 History of Animation

3 courses from the following list: (at least 1 must be ANI)

DC 201 Introduction to Screenwriting

DC 210 Digital Cinema Production I

DC 220 Editing I

Any ANI course

**Computer Graphics Software Development Minor**

**Liberal Studies**

GPH 211 Perceptual Principles for Digital Environments I

or GD 105 Intro to Visual Design

GPH 212 Perceptual Principles for Digital Environments II
### Course Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 261</td>
<td>Programming Languages I: C/C++</td>
</tr>
<tr>
<td>CSC 262</td>
<td>Programming Languages II: C/C++</td>
</tr>
<tr>
<td>CSC 393</td>
<td>Data Structures in C++</td>
</tr>
<tr>
<td>GPH 329</td>
<td>Computer Graphics Development II</td>
</tr>
<tr>
<td>GPH 339</td>
<td>Advanced Rendering Techniques</td>
</tr>
<tr>
<td>GPH 372</td>
<td>Principles of Computer Animation</td>
</tr>
</tbody>
</table>

#### Computer Science Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 241</td>
<td>Introduction to Computer Science I</td>
</tr>
<tr>
<td>and CSC 242</td>
<td>Introduction to Computer Science II</td>
</tr>
<tr>
<td>and CSC 224</td>
<td>Java for Programmers</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>and CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>and CSC 309</td>
<td>Object-Oriented Programming in C++</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 261</td>
<td>Programming Languages I: C/C++</td>
</tr>
<tr>
<td>and CSC 262</td>
<td>Programming Languages II: C/C++</td>
</tr>
<tr>
<td>and CSC 224</td>
<td>Java for Programmers</td>
</tr>
<tr>
<td>CSC 393</td>
<td>Data Structures in C++</td>
</tr>
<tr>
<td>or CSC 383</td>
<td>Data Structures and Algorithms in Java</td>
</tr>
<tr>
<td>MAT 140</td>
<td>Discrete Mathematics I</td>
</tr>
<tr>
<td>CSC 373</td>
<td>Computer Systems I</td>
</tr>
<tr>
<td>CSC 374</td>
<td>Computer Systems II</td>
</tr>
</tbody>
</table>

#### Data Analysis and Data Mining Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 240</td>
<td>Introduction to Desktop Databases</td>
</tr>
<tr>
<td>IT 223</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>CSC 324</td>
<td>Data Analysis and Statistical Software II</td>
</tr>
<tr>
<td>CSC 367</td>
<td>Introduction to Data Mining</td>
</tr>
<tr>
<td>CSC 334</td>
<td>Advanced Data Analysis</td>
</tr>
<tr>
<td>2 CDM Electives</td>
<td></td>
</tr>
</tbody>
</table>

#### Database Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>and CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>IT 223</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>IT 240</td>
<td>Introduction to Desktop Databases</td>
</tr>
<tr>
<td>CSC 352</td>
<td>Database Programming</td>
</tr>
<tr>
<td>CSC 367</td>
<td>Introduction to Data Mining</td>
</tr>
<tr>
<td>1 CDM Elective</td>
<td></td>
</tr>
</tbody>
</table>

#### Data Visualization Development Minor

#### Liberal Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPH 211</td>
<td>Perceptual Principles for Digital Environments I</td>
</tr>
<tr>
<td>GPH 212</td>
<td>Perceptual Principles for Digital Environments II</td>
</tr>
</tbody>
</table>

### Course Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 261</td>
<td>Programming Languages I: C/C++</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>CSC 262</td>
<td>Programming Languages II: C/C++</td>
</tr>
<tr>
<td>CSC 323</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>CSC 393</td>
<td>Data Structures in C++</td>
</tr>
<tr>
<td>GPH 329</td>
<td>Computer Graphics Development II</td>
</tr>
<tr>
<td>GPH 372</td>
<td>Principles of Computer Animation</td>
</tr>
<tr>
<td>GPH 380</td>
<td>Visualization</td>
</tr>
</tbody>
</table>

**Digital Cinema Minor**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 205</td>
<td>Foundations of Cinema</td>
</tr>
<tr>
<td>DC 225</td>
<td>Digital Still Photography</td>
</tr>
<tr>
<td>DC 201</td>
<td>Introduction to Screenwriting</td>
</tr>
<tr>
<td>DC 220</td>
<td>Editing I</td>
</tr>
</tbody>
</table>

3 courses from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>DC 210</td>
<td>Digital Cinema Production I</td>
</tr>
<tr>
<td>DC 270</td>
<td>Topics in Digital Cinema</td>
</tr>
<tr>
<td>DC 215</td>
<td>Digital Sound Design</td>
</tr>
<tr>
<td>DC 275</td>
<td>Cinematography</td>
</tr>
<tr>
<td>DC 310</td>
<td>Digital Cinema Production II</td>
</tr>
<tr>
<td>DC 320</td>
<td>Editing II</td>
</tr>
<tr>
<td>DC 389</td>
<td>The Big Picture: The Entertainment Industry</td>
</tr>
</tbody>
</table>

**E-Commerce Technology Minor**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>IT 230</td>
<td>Building Internet Applications</td>
</tr>
<tr>
<td>ECT 330</td>
<td>Advanced Internet Application Development</td>
</tr>
<tr>
<td>IM 210</td>
<td>Introduction to Human-Computer Interaction</td>
</tr>
</tbody>
</table>

1 course from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECT 355</td>
<td>Internet Systems: Collaboration, Commerce, and Media</td>
</tr>
<tr>
<td>ECT 360</td>
<td>Introduction to XML</td>
</tr>
<tr>
<td>ECT 365</td>
<td>Web Server Operations</td>
</tr>
</tbody>
</table>

**Game Design Minor**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 201</td>
<td>Introduction to Screenwriting</td>
</tr>
<tr>
<td>GD 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>or ANI 201</td>
<td>Animation I</td>
</tr>
<tr>
<td>ANI 230</td>
<td>3D Design &amp; Modeling</td>
</tr>
<tr>
<td>GAM 224</td>
<td>Introduction to Game Design</td>
</tr>
<tr>
<td>or GAM 226</td>
<td>Game Design for Majors</td>
</tr>
<tr>
<td>GAM 244</td>
<td>Game Development I</td>
</tr>
<tr>
<td>GAM 245</td>
<td>Game Development II</td>
</tr>
</tbody>
</table>

**Game Programming Minor**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAM 224</td>
<td>Introduction to Game Design</td>
</tr>
<tr>
<td>or GAM 226</td>
<td>Game Design for Majors</td>
</tr>
<tr>
<td>GAM 244</td>
<td>Game Development I</td>
</tr>
<tr>
<td>GAM 245</td>
<td>Game Development II</td>
</tr>
</tbody>
</table>
GAM 374  Action Games Programming

2 courses from the following list:
ANI 230  3D Design & Modeling
GPH 321  Computer Graphics Development I
GPH 329  Computer Graphics Development II
GPH 350  Digital Modeling II
Any other 300-Level GAM or GPH course

Graphic Design Minor

GD 105  Intro to Visual Design
GD 200  Graphic Design I
GD 300  Graphic Design II
GD 230  Typography

3 courses from the following list and/or any GD course (at least 1 must be GD):
ANI 101  Animation for Non-Majors
ANI 201  Animation I
ANI 230  3d Design and Modeling
ANI 260  Motion Graphics
ANI 360  Advanced Motion Graphics
DC 125  Digital Still Photography for Non-Majors
DC 220  Editing I
DC 225  Digital Still Photography
DC 321  Production Design
DC 376  Visual Design
IM 220  Interactive Media I
IM 222  Information Visualization
IM 320  Interactive Media II
IM 270  User-Centered Web Design
IT 130  The Internet and the Web

2 of the following courses may substitute for 1 course:
GD 350  Portfolio Workshop
GD 150  Illustrator Workshop
GD 151  Photoshop Workshop
GD 152  Digital Typography Workshop

Information and Computing in the Modern World Minor

ECT 350  Internet, Commerce and Society
HCI 201  Multimedia and the World Wide Web
IT 201  Introduction to Information Systems
IT 215  Analysis and Design Techniques
CSC 223  The Impact of Computing Technology on Our Lives
or IT 228  Ethics in Computer Games and Cinema
or CSC 208  The Computer and Social Responsibility
or IS 208  Information Technology, Economy and Society
IS 356  Knowledge Management Systems
or IS 374  Management Support Systems
or IT 398  Topics in Global Information Technology

Interactive Media Minor

Required Courses
HCI 201  Multimedia and the World Wide Web
or IT 130 The Internet and the Web
IM 210 Introduction to Human-Computer Interaction
GD 105 Intro to Visual Design
or GPH 211 Perceptual Principles for Digital Environments
IM 220 Interactive Media I
IM 270 User-centered Web Design

2 courses from the following list:
IM 222 Information Visualization
IM 208 Virtual Worlds and Online Communities
IM 230 Scripting for Interactive Media
IM 320 Interactive Media II
IM 330 Advanced Scripting for Interactive Media
IT 231 Web Development I
IM 320 Interactive Media II

**Information Systems Minor**

IT 240 Introduction to Desktop Databases
IT 201 Introduction to Information Systems
IT 215 Analysis and Design Techniques
IS 372 Fundamentals of Software Project Management
IS 373 Introduction to Large Systems Implementation

**Information Technology Minor**

IT 130 The Internet and the Web
IT 231 Web Development I
IT 240 Introduction to Desktop Databases
IT 263 Applied Networks and Security
or TDC 261 Basic Communication Systems
IT 215 Analysis and Design Techniques
1 CDM Elective

**Network Technology Minor**

CSC 211 Programming in Java I
or CSC 261 Programming Languages I:C/C++
CSC 212 Programming in Java II
or CSC 262 Programming Langauge II:C/C++
IT 201 Introduction to Information Systems
IT 263 Applied Networks and Security
TDC 362 Principles of Data Communication
TDC 363 Introduction to Local Area Networks
TDC 365 Network Interconnection Technologies

**Screenwriting Minor**

DC 201 Introduction to Screenwriting
DC 222 Classic Hollywood Film Structure
DC 301 Advanced Screenwriting I
DC 302 Advanced Screenwriting II
DC 303 Advanced Screenwriting III
DC 304 Topics in Screenwriting
Security Minor

CSC 211   Programming in Java I
and CSC 212  Programming in Java II

or

CSC 261   Programming Language I: C/C++
and CSC 262  Programming Language II: C/C++

CSC 233   Codes and Cyphers

or CSC 333  Cryptology

CNS 378   Host and Information Security
CNS 320   Computer Forensic and Incident Response
CNS 228   Legal, Ethical and Social Issues in Information Security
CNS 340   Fundamentals of Information Assurance

Security in the Electronic World Minor

IT 130   The Internet and the Web
and IT 231  Web Development I
and IT 232  Web Development II

or

CSC 261   Programming Language I: C/C++
and CSC 262  Programming Language II: C/C++

or

CSC 241   Introduction to Computer Science I
and CSC 242  Introduction to Computer Science II

or

CSC 211  Programming in Java I
and CSC 212  Programming in Java II

CNS 228   Legal, Ethical and Social Issues in Information Security
CSC 233   Codes and Cyphers
CNS 320   Computer Forensic and Incident Response
CNS 340   Fundamentals of Information Assurance

Software Engineering Minor

CSC 261  Programming Languages I: C/C++
and CSC 262  Programming Languages II: C/C++
and CSC 224  Java for Programmers

or

CSC 241  Introduction to Computer Science I
and CSC 242  Introduction to Computer Science II
and CSC 224  Java for Programmers

or

CSC 211  Programming in Java I
CSC 212  Programming in Java II
and then
CSC 383  Data Structures and Algorithms in Java
SE 325  Principles and Practices of Software Engineering
SE 330  Object-Oriented Modeling
SE 350  Object-Oriented Software Development

Sound Design Minor
DC 215  Digital Sound Design
DC 312  Music for Film and Video
DC 313  Production Sound
DC 315  Advanced Digital Sound Design
3 courses from the following list
GAM 250  Digital Sound for Computer Games
DC 317  Advanced Sound Mixing for Cinema
DC 318  Advanced Dialogue Recording and Editing
DC 319  Advanced Sound Effects Recording and Editing
DC 313  Sound for Multimedia
DC 203  History of Motion Picture Sound

Television Production Minor

DC 210  Digital Cinema Production I
DC 220  Editing I
DC 271  Introduction to Television Production
DC 272  Writing for Television
TV 289  The Business of Television
TV 320  Editing for Television
TV 301  Television Program Development
DC 372  Topics in TV Production

Visual Computing Minor

MAT 140  Discrete Mathematics I
or MAT 220  Linear Algebra with Applications
or 1 quarter of Calculus (Prerequisite for CSC 381)
IT 223  Data Analysis (Prerequisite for CSC 367)
CSC 381  Introduction to Digital Image Processing
CSC 382  Applied Image Analysis
IT 300  Research Experience
CSC 367  Introduction to Data Mining (IT 223 requirement)

Visual Effects Minor

ANI 230  3D Design & Modeling
ANI 379  Advanced 3D Compositing
DC 220  Editing I
DC 325  Color Correction
VFX 200  Introduction to Visual Effects
VFX 278  Digital Compositing I
VFX 378  Digital Compositing II

Bachelor of Arts Degree Programs

College of Computing and Digital Media - Undergraduate Studies "School of Computing (SoC) "Bachelor of Arts Degree Programs

Computing (Joint with SNL)

The BA in Computing, offered jointly by CDM and DePaul's School for New Learning (SNL), prepares adult
students for a computer-related career. The program is designed to be flexible for working adults, providing online and evening classes in DePaul's Loop, Naperville, Oak Forest, and O'Hare campuses. The personalized curriculum is competence-based, allowing students to earn credit from previous college courses, work, and life experience.

**Degree Requirements**

The Lifelong Learning Area consists of 12 competences satisfied by 9 required SNL courses, approved transfer courses or proficiency exams.

The Liberal Learning Area consists of 26 competences in 4 categories. Competences can be satisfied by SNL and CDM courses, relevant transfer courses of C- or better, and documented college-level learning from experience.

Focus Area consists of 12 competences satisfied through CDM courses, approved transfer courses and Advanced Project from SNL.

**Course Requirements**

For more information about the BA in Computing degree, please visit the School for New Learning website at [http://snl.depaul.edu/Programs/UgradDegree/BAComputing.asp](http://snl.depaul.edu/Programs/UgradDegree/BAComputing.asp) or contact SNL advising.

---

### Information Technology

The **B.A. in Information Technology** program will give students a broad education in current areas of information technology, with a focus on producing educated and sophisticated consumers of information technology. Students in this program will gain:

- An understanding of the impact of information and communication technologies on social, cultural, and ethical dimensions.
- Strong quantitative and reasoning skills with the ability to present technical data in verbal, written, and graphical forms.
- Verbal and written communication literacy.
- Students will also have an opportunity to specialize in a domain of interest or to acquire a generalized education in information technology.

**Online Learning Options**

Many courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.A. degree in Information Technology.

<table>
<thead>
<tr>
<th><strong>First Year Program</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
</tr>
<tr>
<td><strong>Writing</strong></td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp;</strong></td>
</tr>
<tr>
<td><strong>Technological Literacy</strong></td>
</tr>
<tr>
<td><strong>Sophomore Year</strong></td>
</tr>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
</tr>
</tbody>
</table>

---

College of Computing and Digital Media - Undergraduate Studies ▶ School of Computing (SoC) ▶ Bachelor of Arts Degree Programs ▶ Information Technology

---
### Junior Year

<table>
<thead>
<tr>
<th>Experiential Learning</th>
<th>Required</th>
</tr>
</thead>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>Capstone</th>
<th>Required*</th>
</tr>
</thead>
</table>

### Learning Domains

<table>
<thead>
<tr>
<th>Arts and Literature (AL)</th>
<th>3 Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required (See note below)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required (See note below)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

**Notes:**
- 1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)
- * Students must earn a C- or better in this course.

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees. The representation of these course requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

### First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>IT 201</td>
<td>Introduction to Information Systems</td>
</tr>
<tr>
<td>IT 240</td>
<td>Introduction to Desktop Databases</td>
</tr>
<tr>
<td>ICS 200</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>7 Liberal Studies</td>
<td></td>
</tr>
<tr>
<td>1 Open Elective</td>
<td></td>
</tr>
</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 231</td>
<td>Web Development I</td>
</tr>
<tr>
<td>IT 223</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>or CSC 239</td>
<td>Personal Computing</td>
</tr>
<tr>
<td>IM 210</td>
<td>Introduction to Human-Computer Interaction</td>
</tr>
<tr>
<td>IT 263</td>
<td>Applied Networks and Security</td>
</tr>
<tr>
<td>or TDC 261</td>
<td>Basic Communication Systems</td>
</tr>
<tr>
<td>CSC 223</td>
<td>The Impact of Computing Technology On Our Lives</td>
</tr>
<tr>
<td>ORGC 212</td>
<td>Small Group Communication</td>
</tr>
<tr>
<td>or INTC 220</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>5 Liberal Studies</td>
<td></td>
</tr>
<tr>
<td>1 Open Elective</td>
<td></td>
</tr>
</tbody>
</table>

### Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRD 204</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>or WRD 301</td>
<td>Writing in Workplace Contexts</td>
</tr>
<tr>
<td>4 Technical grounding courses from the following list</td>
<td></td>
</tr>
<tr>
<td>IT 215</td>
<td>Analysis and Design Techniques</td>
</tr>
</tbody>
</table>
IT 232  Web Development II
IT 330  User Interface Development for Interactive Systems
IT 320  Content Management Systems
CSC 211  Programming in Java I
CSC 212  Programming in Java II
CSC 261  Programming in C++ I
CSC 262  Programming in C++ II
ECT 330  Advanced Internet Application Development
IM 230  Scripting for Interactive Media
IM 270  User-Centered Web Design
IM 330  Advanced Scripting for Interactive Media
GPH 211  Perceptual Principles for Digital Environments I
GPH 212  Perceptual Principles for Digital Environments II
GAM 244  Game Development I
GAM 245  Game Development II
SE 325  Introduction to Software Engineering
TDC 363  Introduction to Local Area Networks

5 Liberal Studies
1 Major Elective
1 Open Elective

Fourth Year
CSC 378  Software Projects for Community Clients (Capstone)*
CSC 399  Independent Study*
1 Liberal Studies
4 Major Electives
5 Open Electives

*CSC 378 is the first of a two course sequence (8 credit hours). It counts for both the capstone and the Junior Year Experiential Learning. The second course in the sequence is a special section of CSC 399. Both quarters must be completed to receive any credit.

Major Electives
A minimum of 2 major electives must be chosen from any 300 level CDM courses. A maximum of 3 major electives may be chosen from any 200-level (or higher) DePaul Course. Students must earn a grade of C- or higher in all major elective courses.

Open Electives
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements
Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Bachelor of Science Degree Programs
Computer Games Development (Joint with CIM)

The B.S. in Computer Games Development prepares students to work in the multi-disciplinary field of computer gaming and interactive media. This program also requires strong mathematical and programming skills. CDM's Computer Games Development program combines coursework in game programming, game design, 3D Modeling, animation, physics, and artificial intelligence. Students work in cross-disciplinary teams to design and develop games. This program was created in consultation with our Game Dev Industry Advisory Board, and is the result of input from many of the top game programmers, producers and designers in the Chicago area.

Concentrations

Production and Design Concentration
Students in this concentration receive an education in all areas of game development, including game design, programming and animation, but also the basic business skills of project management, budgeting, contract negotiation, marketing and quality assurance.

Game Programming Concentration
Students in this concentration engage in the rigorous study of computer science basics, and then apply this knowledge to the demanding specialization of game programming. Areas of study include computer graphics development, computer science, linear algebra, game physics, and artificial intelligence programming.

Online Learning Options

Many courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

Production & Design Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Computer Games Development (Production and Design Concentration).

<table>
<thead>
<tr>
<th>First Year Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
</tr>
<tr>
<td>Focal Point</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Course Requirements

<table>
<thead>
<tr>
<th>Domain</th>
<th>Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Notes:</td>
<td>* Students must earn a C- or better in this course.</td>
</tr>
</tbody>
</table>

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

#### First Year

- **GAM 226** Game Design for Majors
- **GD 105** Intro to Visual Design
- **GAM 244** Game Development I
- **GAM 245** Game Development II
- **ANI 101** Animation for Non-Majors
  or **ANI 201** Animation I
- 7 Liberal Studies

#### Second Year

- **GAM 230** Intro to Game Production
- **MAT 150** Calculus I
- **CSC 261** Programming in C++ I
- **CSC 262** Programming in C++ II
- **GAM 341** Introduction to Level Design
- **ANI 230** 3D Design & Modeling
- 5 Liberal Studies
  1 Major Elective

#### Third Year

- **ANI 231** 3D Animation
- **GAM 250** Digital Sound for Computer Games
- **GAM 374** Fundamentals of Game Programming I
- **IM 220** Interactive Media I
- **WRD 204** Technical Writing
- 4 Liberal Studies
  3 Major Electives

#### Fourth Year

- **GAM 333** The Business of Games
- **GAM 392** Game Modification Workshop
- **GAM 394** Game Development Project I
- **GAM 395** Game Development Project II (Capstone)
- 3 Liberal Studies
  1 Major Elective
  4 Open Electives

**Major Electives**
Major electives can be chosen from the following list:
- 200 level ANI, DC, GAM, GD, GPH, or IM courses
- 300 level CDM courses

Students must earn a grade of C- or higher in all major elective courses.

**Open Electives**

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. Click here for details. Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

**Degree Requirements**

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

**Game Programming Concentration**

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Computer Games Development (Game Programming Concentration).

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
</tr>
</tbody>
</table>

**Learning Domains**

<table>
<thead>
<tr>
<th>Arts and Literature (AL)</th>
<th>3 courses required:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- DC 201</td>
</tr>
<tr>
<td></td>
<td>- ANI 101</td>
</tr>
<tr>
<td></td>
<td>- 1 Additional Course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Philosophical Inquiry (PI)</th>
<th>2 courses required:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- DC 228/IT 228</td>
</tr>
<tr>
<td></td>
<td>- 1 Additional Course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious Dimensions (RD)</th>
<th>2 Courses Required</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Scientific Inquiry (SI)</th>
<th>1 SI Lab Course Required</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Self, Society and the Modern World (SSMW)</th>
<th>3 Courses Required</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Understanding the Past (UP)</th>
<th>2 Courses Required</th>
</tr>
</thead>
</table>
Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**
- GAM 226  Game Design For Majors
- GD 105  Intro to Visual Design
- GAM 244  Game Development I
- CSC 261  Programming in C++ I
- CSC 262  Programming in C++ II
- MAT 150  Calculus I
- MAT 151  Calculus II
- 5 Liberal Studies

**Second Year**
- GAM 245  Game Developoment II
- CSC 393  Data Structures in C++
- ANI 230  3D Design & Modeling
- 7 Liberal Studies
- 2 Major Electives

**Third Year**
- CSC 373  Computer Systems I
- CSC 374  Computer Systems II
- GAM 350  Physics for Game Developers
- GAM 374  Fundamentals of Game Programming I
- GAM 377  Fundamentals of Game Programming II
- GPH 321  Computer Graphics Development I
- GPH 329  Computer Graphics Development II
- 4 Liberal Studies
- 1 Major Elective

**Fourth Year**
- GAM 376  Artificial Intelligence for Computer Games
- GPH 389  Real-Time Graphics Techniques
- GAM 392  Game Modification Workshop
- GAM 394  Game Development Project I
- GAM 395  Game Development Project II (Capstone)
- 3 Liberal Studies
- 1 Major Elective
- 3 Open Electives

**Major Electives**

Major electives can be chosen from the following list:

- 200 level ANI, DC, GAM, GPH, or IM courses
- 300 level CDM courses

Students must earn a grade of C- or higher in all major elective courses.
Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook

Computer Graphics and Motion Technology (Joint with CIM)

The B.S. in Computer Graphics and Motion Technology prepares students who have a passion for art, math or technology for a multitude of career paths in computer graphics animation. Graduates from this major create visuals for video games, scientific and aerospace visualization, movies, television, and advertising. Students in this program will learn

- Design and analysis of mathematics/computer science programming principles for computer graphic design.
- History and theory of graphic design (color theory, perception).
- Usability and human-computer interaction.
- Hands-on, practical knowledge of digital photography, 3D animation, 3D modeling, texturing and rendering.
- Visual communication techniques.
- Real world experience working in a group as a contributing team member.
- Creating animation in a production pipeline environment.

Concentrations

Developer Concentration
This concentration prepares students for careers in graphics software development, with courses in programming languages (C/C++) and mathematics (calculus and algebra), in addition to animation and computer graphics.

Technical Designer Concentration
This concentration prepares students interested in visual aspects, including lighting setup, shader development, scripting and character rigging.

Online Learning Options

Some courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more
The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. degree in Computer Graphics and Motion Technology (Developer Concentration).

### First Year Program

<table>
<thead>
<tr>
<th>Category</th>
<th>Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp;</td>
<td>Not Required</td>
</tr>
<tr>
<td>Technological Literacy</td>
<td></td>
</tr>
<tr>
<td>Sophomore Year</td>
<td>LSP 200</td>
</tr>
<tr>
<td>Multiculturalism in the US</td>
<td></td>
</tr>
</tbody>
</table>

### Junior Year

Experiential Learning: Required

### Senior Year

Capstone: GPH 395*

### Learning Domains

<table>
<thead>
<tr>
<th>Domain</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required, (See note below)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required, (See note below)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

**Notes:**
- 1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)
- Students must earn a C- or better in this course.

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

### First Year

- CSC 261 Programming in C++ I
- CSC 262 Programming in C++ II
- CSC 393 Data Structures in C++
- GPH 211 Perceptual Principles for Digital Environments I
- or GD 105 Intro to Visual Design
- GPH 212 Perceptual Principles for Digital Environments II
ANI 201  Animation I
MAT 140  Discrete Mathematics I
One of the following two-course sequences

**Calculus Sequence (option 1)**
MAT 150  Calculus I
MAT 151  Calculus II

**Calculus for Mathematics and Science Majors Sequence (option 2)**
MAT 160  Calculus for Mathematics and Science Majors I
MAT 161  Calculus for Mathematics and Science Majors II

**Calculus with Scientific Applications Sequence (option 3) Recommended**
MAT 170  Calculus I with Scientific Applications
MAT 171  Calculus II with Scientific Applications

3 Liberal Studies

**Second Year**
GPH 325  Survey of Computer Graphics
GPH 329  Computer Graphics Development II
GPH 339  Advanced Rendering Techniques
GPH 321  Computer Graphics Development I
or MAT 220  Linear Algebra with Applications
INTC 220  Public Speaking
7 Liberal Studies

**Third Year**
GPH 372  Principles of Computer Animation
CSC 321  Design and Analysis of Algorithms
IM 315  Theory and Perception of Color
WRD 204  Technical Writing
5 Liberal Studies
3 Major Electives

**Fourth Year**
GPH 375  Advanced Graphics Development
GPH 388  Production Pipeline Techniques
GPH 389  Real-Time Graphics Techniques
GPH 395  Computer Graphics Senior Project (Capstone)
4 Liberal Studies
1 Major Elective
3 Open Electives

**Major Electives**

Students must earn a grade of C- or higher in all major elective courses.

Students can take any of the following courses, as long as it was not previously used to satisfy a major requirement.

ANI 300  3D Character Animation
ANI 310  Motion Capture Workshop
ART 225  Beginning Photography
ART 329  Advanced Digital Photography
ART 360  Illustration
GPH 336  Smooth Surface Modeling for Graphics and Animation
GPH 340  Procedural Shading
GPH 341  Advanced Lighting Techniques
GPH 348  Rigging for Animation
GPH 376    Artificial Intelligence in Computer Games
GPH 380    Visualization
GPH 389    Real-Time Graphics Techniques
GPH 345    Digital Surface Modeling
GPH 259    Design Geometry
GPH 329    Computer Graphics Development II
GPH 350    Digital Modeling II
GPH 358    Computer Graphics Animation
GPH 360    Modeling Spaces
GPH 374    Computer Games
GPH 375    Advanced Graphics Development
HAA 263    History of Design
IM 210     Introduction to Human-Computer Interaction
IM 270     User-Centered Web Design
IM 322     Multimedia
IM 330     Advanced Scripting for Interactive Media
or IM 336  Interactive Media Scripting for Programmers *
IT 223     Data Analysis Self Placement Test
MAT 150    Calculus I
MAT 151    Calculus II
MAT 152    Calculus III

* Students who take CSC 261 and CSC 262 may take IM 330 or IM 336 as an elective. Only one of the two would count as an elective.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul’s policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Technical Designer Concentration:

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. degree in Computer Graphics and Motion Technology (Technical Designer Concentration).

<table>
<thead>
<tr>
<th>First Year Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
</tr>
<tr>
<td>Focal Point</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
</tr>
</tbody>
</table>

**Sophomore Year**

| Multiculturalism in the US | LSP 200 |

**Junior Year**

| Experiential Learning | Required |

**Senior Year**

| Capstone | GPH 395* |

### Learning Domains

<table>
<thead>
<tr>
<th>Arts and Literature (AL)</th>
<th>3 Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>- HAA 130</td>
<td></td>
</tr>
<tr>
<td>- ART 106</td>
<td></td>
</tr>
<tr>
<td>- 1 Additional Course</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Philosophical Inquiry (PI)</th>
<th>2 Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>(See note below)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious Dimensions (RD)</th>
<th>2 Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>(See note below)</td>
<td></td>
</tr>
</tbody>
</table>

| Scientific Inquiry (SI) | 1 SI Lab Course Required |

| Self, Society and the Modern World (SSMW) | 3 Courses Required |

| Understanding the Past (UP) | 2 Courses Required |

**Notes:**

1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)

* Students must earn a C- or better in this course.

---

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees. The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**

- IM 230 Scripting for Interactive Media
- and IM 330 Advanced Scripting for Interactive Media
- or CSC 261 Programming in C++ I
- and CSC 262 Programming in C++ II
- GPH 211 Perceptual Principles for Digital Environments I
- or GD 105 Intro to Visual Design
- GPH 212 Perceptual Principles for Digital Environments II
- GPH 259 Design Geometry
- ANI 201 Animation I
- MAT 140 Discrete Mathematics I
- 5 Liberal Studies

**Second Year**

- GPH 345 Digital Surface Modeling
- GPH 255 Hand Prototyping for Graphic Visualization
GPH 325  Survey of Computer Graphics
GPH 358  Computer Graphics Automation
IM 210  Introduction to Human-Computer Interaction
HAA 115  Principles of Asian Art
INTC 220  Public Speaking
5 Liberal Studies

**Third Year**

IM 315  Theory and Perception of Color
or ART 205  Color Theory and Application
GPH 338  Survey of 3-D Animation
GPH 339  Advanced Rendering Techniques
HAA 242  Art From 1945 - 1975
WRD 204  Technical Writing
6 Liberal Studies
1 Major Elective

**Fourth Year**

GPH 388  Production Pipeline Techniques
GPH 395  Computer Graphics Senior Project (Capstone)

3 Liberal Studies
4 Major Electives
3 Open Electives

**Major Electives**

Students must earn a grade of C- or higher in all major elective courses.

Students can take any of the following courses, as long as it was not previously used to satisfy a major requirement.

ANI 300  3D Character Animation
ANI 310  Motion Capture Workshop
ART 225  Beginning Photography
ART 329  Advanced Digital Photography
ART 360  Illustration
GPH 259  Design Geometry
GPH 336  Smooth Surface Modeling for Graphics and Animation
GPH 340  Procedural Shading
GPH 341  Advanced Lighting Techniques
GPH 348  Rigging for Animation
GPH 376  Artificial Intelligence in Computer Games
GPH 380  Visualization
GPH 389  Real-Time Graphics Techniques
GPH 345  Digital Surface Modeling
GPH 329  Computer Graphics Development II
GPH 350  Digital Modeling II
GPH 358  Computer Graphics Automation
GPH 360  Modeling Spaces
GPH 374  Computer Games
GPH 375  Advanced Graphics Development
HAA 263  History of Design
IM 210  Introduction to Human-Computer Interaction
IM 270  User-Centered Web Design
IM 322  Multimedia
IM 330  Advanced Scripting for Interactive Media
or IM 336 Interactive Media Scripting for Programmers *
IT 223 Data Analysis Self Placement Test
MAT 150 Calculus I
MAT 151 Calculus II
MAT 152 Calculus III

* Students who take CSC 261 and CSC 262 may take IM 330 or IM 336 as an elective. Only one of the two would count as an elective.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul’s policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

College of Computing and Digital Media - Undergraduate Studies ▸ School of Computing (SoC) ▸ Bachelor of Science Degree Programs ▸ Computer Science

Computer Science

The B.S. in Computer Science at DePaul CDM provides training in the foundations of computing, data storage and information processing. With this foundation, graduates of the program can easily adapt to and create new information technologies, new computing paradigms, and new ideas for applying computer systems. Students in the program will develop a broad set of skills and expertise:

- Programming and software development skills, the technical tools of the IT trade
- An understanding of modern computer systems, and how to use them to develop computer applications
- Skills in application areas such as security and cryptography, robotics and computer vision, data mining and databases, distributed and mobile systems, intelligent systems and gaming, computational biology, etc.

BS in Computer Science Degree Requirements

Concentration

The Software Engineering concentration provides students with skills, knowledge, and experiences in state-of-the-art software engineering methodologies, techniques, and applications.

Online Learning Options

Some courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.
Course Requirements

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the Bachelor of Science degree in Computer Science.

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp;</td>
<td>Not Required</td>
</tr>
<tr>
<td>Technological Literacy</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the</td>
<td>LSP 200</td>
</tr>
<tr>
<td>US</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>CSC 394*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required:</td>
</tr>
<tr>
<td></td>
<td>- CSC 208</td>
</tr>
<tr>
<td></td>
<td>- 1 Additional Course</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 241</td>
<td>Introduction to Computer Science I</td>
</tr>
<tr>
<td>CSC 242</td>
<td>Introduction to Computer Science II</td>
</tr>
<tr>
<td>MAT 140</td>
<td>Discrete Mathematics I</td>
</tr>
<tr>
<td>MAT 141</td>
<td>Discrete Mathematics II</td>
</tr>
<tr>
<td>CSC 224</td>
<td>Java for Programmers</td>
</tr>
<tr>
<td>IT 223</td>
<td>Data Analysis</td>
</tr>
<tr>
<td></td>
<td>6 Liberal Studies</td>
</tr>
</tbody>
</table>

**Second Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 383</td>
<td>Data Structures and Algorithms in Java</td>
</tr>
<tr>
<td>or CSC 393</td>
<td>Data Structures in C++</td>
</tr>
<tr>
<td>CSC 321</td>
<td>Design and Analysis of Algorithms</td>
</tr>
</tbody>
</table>
CSC 309  Object-Oriented Programming in C++
CSC 373  Computer Systems I
CSC 374  Computer Systems II
WRD 204  Technical Writing
5 Liberal Studies
1 Open Elective

**Third Year**
CSC 355  Database Systems
SE 350  Object-Oriented Software Development
INTC 220  Public Speaking
4 Liberal Studies
3 Major Electives
2 Open Electives

**Fourth Year**
CSC 376  Distributed Systems
CSC 348  Introduction to Compiler Design
CSC 394  Software Projects (Capstone)
4 Liberal Studies
3 Major Electives
2 Open Electives

**Major Electives**

Students must earn a grade of C- or higher in all major elective courses.

Major electives can be chosen from the list below. At least 4 of the 6 Major Field elective courses must be taken from the list of **Advanced Major Field** courses.

**Introductory Major Field Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 233</td>
<td>Codes and Ciphers</td>
</tr>
<tr>
<td>CSC 235</td>
<td>Problem Solving</td>
</tr>
<tr>
<td>GAM 244</td>
<td>Game Development I</td>
</tr>
<tr>
<td>GAM 245</td>
<td>Game Development II</td>
</tr>
<tr>
<td>IM 210</td>
<td>Introduction to Human-Computer Interaction</td>
</tr>
<tr>
<td>IM 336</td>
<td>Interactive Media Scripting for Programmers</td>
</tr>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>IT 231</td>
<td>Web Development I</td>
</tr>
<tr>
<td>IT 232</td>
<td>Web Development II</td>
</tr>
<tr>
<td>IT 263</td>
<td>Applied Networks and Security</td>
</tr>
<tr>
<td>MAT 150</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MAT 151</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>

**Advanced Major Field Courses**

**Artificial Intelligence**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 357</td>
<td>Expert Systems</td>
</tr>
<tr>
<td>CSC 358</td>
<td>Symbolic Programming</td>
</tr>
<tr>
<td>CSC 380</td>
<td>Foundations of Artificial Intelligence</td>
</tr>
<tr>
<td>CSC 395</td>
<td>Introduction to Social Computing</td>
</tr>
</tbody>
</table>

**Computational Sciences**
CSC 331 Scientific Computing

Computer Game Development

GAM 350 Physics for Game Developers
GAM 374 Fundamentals of Game Programming I
GAM 376 Artificial Intelligence for Computer Games
GAM 378 Strategy Games Programming
GAM 380 Console Game Development Environments
GAM 382 Serious Games
GAM 386 Game Development for Mobile Devices
GAM 390 Multiplayer Game Development
GAM 391 Game Performance Optimization
GAM 394 Game Development Project I
GAM 395 Game Development Project II

Computer Graphics

GPH 325 Survey of Computer Graphics
GPH 329 Computer Graphics Development II
GPH 339 Advanced Rendering Techniques
GPH 372 Principles of Computer Animation
GPH 375 Advanced Graphics Development
GPH 389 Real-Time Graphics Techniques
GPH 395 Computer Graphics Senior Project

Computer Networks

TDC 362 Principles of Data Communications
TDC 363 Introduction to Local Area Networks
TDC 365 Network Interconnection Technologies
TDC 371 Wireless Communications Networks
TDC 372 Digital Access Services
TDC 375 Network Protocols
TDC 377 Fundamentals of Network Security
TDC 379 Telecommunication and Network Security Practicum

Computer Systems

CSC 343 Introduction to Operating Systems
CSC 347 Concepts of Programming Languages
CSC 375 Introduction to Robotics
TDC 368 Network Programming

Computer Vision

CSC 381 Introduction to Digital Image Processing
CSC 382 Applied Image Analysis

Data Analysis and Data Mining
CSC 324  Data Analysis and Statistical Software II  
CSC 334  Advanced Data Analysis  
CSC 367  Introduction to Data Mining  

**Database Storage**  

CSC 352  Database Programming  
CSC 353  Advanced Database Concepts  

**Human-Computer Interaction**  

CSC 360  User Interface Architecture and Development  
IM 360  User-Centered Evaluation  
IT 330  User Interface Development for Interactive Systems  

**Security**  

CNS 320  Computer Forensic and Incident Response  
CNS 340  Fundamentals of Information Assurance  
CSC 333  Cryptology  

**Software Engineering**  

SE 325  Introduction to Software Engineering  
SE 330  Object Oriented Modeling  
SE 333  Software Testing  
SE 352  Object-Oriented Enterprise Application Development  
SE 368  Software Measurement and Project Estimation  

**Theory of Computation**  

CSC 327  Problem Solving for Contests  
CSC 344  Automata Theory and Formal Grammars  
CSC 389  Theory of Computation  

**Web Development**  

CSC 308  Frameworks for Web Application Development  
ECT 330  Advanced Internet Application Development  
ECT 360  Introduction to XML  
ECT 365  Web Server Operations  
IT 320  Content Management Systems  

**Open Electives**  

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.
Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

B.S. in Computer Science: Software Engineering Concentration Program

This concentration provides students with skills, knowledge, and experiences in state-of-the-art software engineering methodologies, techniques, and applications.

Course Requirements

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Above are the specific requirements for the Bachelor of Science degree in Computer Science.

The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 241</td>
<td>Introduction to Computer Science I</td>
</tr>
<tr>
<td>CSC 242</td>
<td>Introduction to Computer Science II</td>
</tr>
<tr>
<td>MAT 140</td>
<td>Discrete Mathematics I</td>
</tr>
<tr>
<td>MAT 141</td>
<td>Discrete Mathematics II</td>
</tr>
<tr>
<td>CSC 224</td>
<td>Java for Programmers</td>
</tr>
<tr>
<td>6 Liberal Studies</td>
<td></td>
</tr>
<tr>
<td>1 Open Elective</td>
<td></td>
</tr>
</tbody>
</table>

**Second Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 321</td>
<td>Design and Analysis of Algorithms</td>
</tr>
<tr>
<td>SE 325</td>
<td>Introduction to Software Engineering</td>
</tr>
<tr>
<td>SE 350</td>
<td>Object-Oriented Software Development</td>
</tr>
<tr>
<td>CSC 309</td>
<td>Object-Oriented Programming in C++</td>
</tr>
<tr>
<td>WRD 204</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>CSC 383</td>
<td>Data Structures and Algorithms in Java</td>
</tr>
<tr>
<td>or CSC 393</td>
<td>Data Structures in C++</td>
</tr>
<tr>
<td>4 Liberal Studies</td>
<td></td>
</tr>
<tr>
<td>1 CS Major Elective</td>
<td></td>
</tr>
<tr>
<td>1 Open Elective</td>
<td></td>
</tr>
</tbody>
</table>

**Third Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 223</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>CSC 373</td>
<td>Computer Systems I</td>
</tr>
</tbody>
</table>


CSC 374  Computer Systems II
CSC 355  Database Systems
CSC 360  User Interface Architecture and Development
INTC 220  Public Speaking

4  Liberal Studies
2  Open Electives

**Fourth Year**

CSC 376  Distributed Systems
CSC 348  Introduction to Compiler Design
CSC 394  Software Projects (Capstone)

5  Liberal Studies
1  CS Major Elective
2  Major Electives
1  Open Elective

**Major Electives**

Students in the SE concentration can choose major electives from the following list:

SE 330  Object Oriented Modeling
SE 333  Software Testing
SE 352  Object Oriented Enterprise Application Development
CSC 308  Frameworks for Web Application Development
IM 360  User-Centered Evaluation

Students must earn a grade of C- or higher in all major elective courses.

**CS Major Electives**

CS major electives can be chosen from the list of **Introductory Major Field** courses and **Advanced Major Field** courses.

**Introductory Major Field Courses**

CSC 233  Codes and Ciphers
CSC 235  Problem Solving
GAM 244  Game Development I
GAM 245  Game Development II
IM 210  Introduction to Human-Computer Interaction
IM 336  Interactive Media Scripting for Programmers
IT 130  The Internet and the Web
IT 231  Web Development I
IT 232  Web Development II
IT 263  Applied Networks and Security
MAT 150  Calculus I
MAT 151  Calculus II

**Advanced Major Field Courses**

**Artificial Intelligence**

CSC 357  Expert Systems
CSC 358  Symbolic Programming
CSC 380  Foundations of Artificial Intelligence
CSC 395  Introduction to Social Computing

Computational Sciences

CSC 331 Scientific Computing

Computer Game Development

GAM 350  Physics for Game Developers
GAM 374  Fundamentals of Game Programming I
GAM 376  Artificial Intelligence for Computer Games
GAM 378  Strategy Games Programming
GAM 380  Console Game Development Environments
GAM 382  Serious Games
GAM 386  Game Development for Mobile Devices
GAM 390  Multiplayer Game Development
GAM 391  Game Performance Optimization
GAM 394  Game Development Project I
GAM 395  Game Development Project II

Computer Graphics

GPH 325  Survey of Computer Graphics
GPH 329  Computer Graphics Development II
GPH 339  Advanced Rendering Techniques
GPH 372  Principles of Computer Animation
GPH 375  Advanced Graphics Development
GPH 389  Real-Time Graphics Techniques
GPH 395  Computer Graphics Senior Project

Computer Networks

TDC 362  Principles of Data Communications
TDC 363  Introduction to Local Area Networks
TDC 365  Network Interconnection Technologies
TDC 371  Wireless Communications Networks
TDC 372  Digital Access Services
TDC 375  Network Protocols
TDC 377  Fundamentals of Network Security
TDC 379  Telecommunication and Network Security Practicum

Computer Systems

CSC 343  Introduction to Operating Systems
CSC 347  Concepts of Programming Languages
CSC 375  Introduction to Robotics
TDC 368  Network Programming

Computer Vision

CSC 381  Introduction to Digital Image Processing
CSC 382  Applied Image Analysis
**Data Analysis and Data Mining**

CSC 324      Data Analysis and Statistical Software II  
CSC 334      Advanced Data Analysis  
CSC 367      Introduction to Data Mining

**Database Storage**

CSC 352      Database Programming  
CSC 353      Advanced Database Concepts

**Human-Computer Interaction**

CSC 360      User Interface Architecture and Development  
IM 360       User-Centered Evaluation  
IT 330       User Interface Development for Interactive Systems

**Security**

CNS 320      Computer Forensic and Incident Response  
CNS 340      Fundamentals of Information Assurance  
CSC 333      Cryptology

**Software Engineering**

SE 325      Introduction to Software Engineering  
SE 330      Object Oriented Modeling  
SE 333      Software Testing  
SE 352      Object-Oriented Enterprise Application Development  
SE 368      Software Measurement and Project Estimation

**Theory of Computation**

CSC 327      Problem Solving for Contests  
CSC 344      Automata Theory and Formal Grammars  
CSC 389      Theory of Computation

**Web Development**

CSC 308      Frameworks for Web Application Development  
ECT 330      Advanced Internet Application Development  
ECT 360      Introduction to XML  
ECT 365      Web Server Operations  
IT 320      Content Management Systems

**Open Electives**
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

**Degree Requirements**

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the [DePaul Undergraduate Handbook](#).

---

**Information Assurance and Security Engineering**

In the **B.S. in Information Assurance and Security Engineering** students will learn the fundamentals of information security, security infrastructure design and implementation, computer forensics, risk assessment as well as the impact of security requirements on a business operation. Students learn to design, implement and manage various security infrastructure components through hands-on activities in our state-of-the-art information Assurance and Security Laboratory. The lab environment includes multi-vendor firewalls, Virtual Private Networks, intrusion detection and prevention systems, routers, switches, and event correlation systems.

**Online Learning Options**

Many courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the [Online Learning page](#).

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the BS degree in Information Assurance and Security Engineering:

<table>
<thead>
<tr>
<th>First Year Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
</tr>
<tr>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
</tr>
<tr>
<td>LSP 112</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
</tr>
<tr>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp; Technological Literacy</strong></td>
</tr>
<tr>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
</tr>
<tr>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiential Learning</strong></td>
</tr>
<tr>
<td>Required</td>
</tr>
</tbody>
</table>
## Senior Year

<table>
<thead>
<tr>
<th>Capstone</th>
<th>CNS 395*</th>
</tr>
</thead>
</table>

## Learning Domains

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts and Literature (AL)</strong></td>
<td>3 Courses Required</td>
</tr>
</tbody>
</table>
| **Philosophical Inquiry (PI)** | 2 Courses Required  
(See note below) |
| **Religious Dimensions (RD)** | 2 Courses Required  
(See note below) |
| **Scientific Inquiry (SI)** | 1 SI Lab Course Required |
| **Self, Society and the Modern World (SSMW)** | 3 Courses Required |
| **Understanding the Past (UP)** | 2 Courses Required |

### Notes:

1. Of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)
2. * Students must earn a C- or better in this course.

**Note:** Courses offered in the student’s primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

### First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 233</td>
<td>Codes and Ciphers</td>
</tr>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>IT 240</td>
<td>Introduction to Desktop Databases</td>
</tr>
<tr>
<td>IT 263</td>
<td>Applied Networks and Security</td>
</tr>
<tr>
<td>IT 231</td>
<td>Web Development I</td>
</tr>
<tr>
<td>MAT 140</td>
<td>Discrete Mathematics I</td>
</tr>
<tr>
<td></td>
<td>6 Liberal Studies</td>
</tr>
</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>and CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>or CSC 261</td>
<td>Programming in C++ I</td>
</tr>
<tr>
<td>and CSC 262</td>
<td>Programming in C++ II</td>
</tr>
<tr>
<td>CSC 373</td>
<td>Computer Systems I</td>
</tr>
<tr>
<td>CNS 340</td>
<td>Fundamentals of Information Assurance</td>
</tr>
<tr>
<td>TDC 365</td>
<td>Network Interconnection Technologies</td>
</tr>
<tr>
<td>TDC 375</td>
<td>Network Protocols</td>
</tr>
<tr>
<td>WRD 204</td>
<td>Technical Writing</td>
</tr>
<tr>
<td></td>
<td>5 Liberal Studies</td>
</tr>
</tbody>
</table>

### Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDC 377</td>
<td>Fundamentals of Network Security</td>
</tr>
<tr>
<td>CNS 320</td>
<td>Computer Forensic and Incident Response</td>
</tr>
<tr>
<td>CNS 378</td>
<td>Host and Information Security</td>
</tr>
<tr>
<td>ORGC 212</td>
<td>Small Group Communication</td>
</tr>
<tr>
<td>or INTC 220</td>
<td>Public Speaking</td>
</tr>
<tr>
<td></td>
<td>5 Liberal Studies</td>
</tr>
</tbody>
</table>
Fourth Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 101</td>
<td>Introduction to Accounting I</td>
</tr>
<tr>
<td>or FIN 290</td>
<td>Finance for Non-Commerce Majors</td>
</tr>
<tr>
<td>CSC 374</td>
<td>Computer Systems II</td>
</tr>
<tr>
<td>TDC 379</td>
<td>Telecommunication and Network Security Practicum</td>
</tr>
<tr>
<td>CNS 228</td>
<td>Legal, Ethical and Social Issues in Information Security</td>
</tr>
<tr>
<td>CNS 394</td>
<td>Information Systems Security Engineering I</td>
</tr>
<tr>
<td>CNS 395</td>
<td>Information Systems Security Engineering II (Capstone)</td>
</tr>
</tbody>
</table>

1 Liberal Studies
1 Major Elective
4 Open Electives

Major Electives

Major electives can be chosen from any 300 level CDM courses.

Students must earn a grade of C- or higher in all major elective courses.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Information Systems

Students majoring in Information Systems develop the ability to use technology to address the operational, tactical, and strategic challenges facing business, nonprofit, and government organizations. Students in both concentrations develop background in usability and information assurance. Regardless of concentration, common long-term career positions for IS majors include Systems Analyst, Business Analyst, Information Technology Manager / Director, IT Project Manager, and IT Consultant. Job prospects for these positions are excellent, as many IS experts are due to retire over the next five years and the ability to outsource these positions is low.

Concentrations
Analyst
Students following the Analyst Concentration seldom program, and often find entry level positions as user department analysts, acting as the liaison between the Information Technology department and other business units.

Developer
Students following the Developer Concentration do typically program, and are well prepared to begin careers as Web Developers.

Online Learning Options
Many courses in this degree are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

Analyst Concentration
The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the BS degree in Information Systems (Analyst Concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>IS 376*</td>
</tr>
</tbody>
</table>

Learning Domains

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required (See note below)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required (See note below)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Notes:</td>
<td>1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD) * Students must earn a C- or better in this course.</td>
</tr>
</tbody>
</table>

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is
cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees. The representation of these course requirements for the Analyst Concentration on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year
IT 201 Introduction to Information Systems
IT 130 The Internet and the Web
IT 240 Introduction to Desktop Databases
IT 263 Applied Networks and Security
IM 210 Introduction to Human-Computer Interaction
7 Liberal Studies

Second Year
IT 215 Analysis and Design Techniques
IT 223 Data Analysis
IT 320 Content Management Systems
IS 371 Introduction to IT System Management
ORGC 212 Small Group Communications
or INTC 220 Public Speaking
WRD 204 Technical Writing
or WRD 301 Writing in Workplace Contexts
ACC 101 Introduction to Accounting I
or MKT 301 Principles of Marketing
or 1 Psychology course
or 1 Management course
5 Liberal Studies

Third Year
IT 231 Web Development I
or CSC 211 Programming in Java I
IS 372 Fundamentals of Software Project Management
IS 373 Introduction to Large Systems Implementation
IM 360 User-Centered Evaluation
4 Liberal Studies
4 Open Electives

Fourth Year
ECT 310 Internet Application Development
or IT 232 Web Development II
or CSC 212 Programming in Java II
IS 375 Object-Oriented Analysis and Design
CNS 340 Fundamentals of Information Assurance
IS 376 Information Systems project (Capstone)
3 Liberal Studies
2 Major Elective
3 Open Electives

Major Electives
Major electives can be chosen from any 300-level CDM courses.

Students must earn a grade of C- or higher in all major elective courses.

Open Electives
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

**Degree Requirements**

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

**Developer Concentration**

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the BS degree in Information Systems (Developer Concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>IS 376*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>(See note below)</td>
<td></td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>(See note below)</td>
<td></td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

**Notes:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major.
Students who choose to take an experiential learning course offered by the major may count it either as a
general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is
cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy
does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of these course requirements for the Developer Concentration on a year-by-year basis is
just a suggestion. Students are free to take these courses in any order they choose, provided they have
mastered the course-specific prerequisites.

**First Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 201</td>
<td>Introduction to Information Systems</td>
</tr>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>IT 240</td>
<td>Introduction to Desktop Databases</td>
</tr>
<tr>
<td>IT 263</td>
<td>Applied Networks and Security</td>
</tr>
<tr>
<td>IT 231</td>
<td>Web Development I</td>
</tr>
</tbody>
</table>

7 Liberal Studies

**Second Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 215</td>
<td>Analysis and Design Techniques</td>
</tr>
<tr>
<td>IT 223</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>and CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>or CSC 261</td>
<td>Programming in C++ I</td>
</tr>
<tr>
<td>and CSC 262</td>
<td>Programming in C++ II</td>
</tr>
<tr>
<td>CSC 383</td>
<td>Data Structures and Algorithms in Java</td>
</tr>
<tr>
<td>IM 210</td>
<td>Introduction to Human-Computer Interaction</td>
</tr>
<tr>
<td>WRD 204</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>or WRD 301</td>
<td>Writing in Workplace Contexts</td>
</tr>
</tbody>
</table>

5 Liberal Studies

**Third Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECT 330</td>
<td>Advanced Internet Application Development</td>
</tr>
<tr>
<td>IS 372</td>
<td>Fundamentals of Software Project Management</td>
</tr>
<tr>
<td>ECT 355</td>
<td>Internet Systems: Collaboration,Commerce, and Media</td>
</tr>
<tr>
<td>ECT 360</td>
<td>Introduction to XML</td>
</tr>
<tr>
<td>ORGC 212</td>
<td>Small Group Communications</td>
</tr>
<tr>
<td>or INTC 220</td>
<td>Public Speaking</td>
</tr>
</tbody>
</table>

4 Liberal Studies

**Fourth Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 375</td>
<td>Object-Oriented Analysis and Design</td>
</tr>
<tr>
<td>CNS 340</td>
<td>Fundamentals of Information Assurance</td>
</tr>
<tr>
<td>SE 352</td>
<td>Object-Oriented Enterprise Application Development</td>
</tr>
<tr>
<td>IS 376</td>
<td>Information Systems project (Capstone)</td>
</tr>
</tbody>
</table>

3 Liberal Studies

**Major Electives**

Major electives can be chosen from any 300-level CDM courses.

Students must earn a grade of C- or higher in all major elective courses.
Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Information Technology

The B.S. in Information Technology is a technical degree that instructs students in core competencies in the areas of problem solving and programming, networks and communications systems, databases, internet and web technologies, security, and project management. Students also receive a solid academic foundation in business concepts and technical communication.

Online Learning Options

Many courses in this degree are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

Liberal Studies

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. degree in Information Technology:

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
<td>LSP 112</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp;</strong></td>
<td>Not Required</td>
</tr>
<tr>
<td><strong>Technological Literacy</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>Senior Year</strong></td>
<td></td>
</tr>
<tr>
<td>Capstone</td>
<td>Required*</td>
</tr>
<tr>
<td><strong>Learning Domains</strong></td>
<td></td>
</tr>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required</td>
</tr>
</tbody>
</table>
| Philosophical Inquiry (PI) | 2 Courses Required  
(See note below) |
| Religious Dimensions (RD) | 2 Courses Required  
(See note below) |
| Scientific Inquiry (SI) | 1 SI Lab Course Required |
| Self, Society and the Modern World (SSMW) | 3 Courses Required:  
- ECO 105  
- 2 Additional Courses |
| Understanding the Past (UP) | 2 Courses Required |
| **Notes:** |          |
| 1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD) |
| * Students must earn a C- or better in this course. |

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**
- IT 130 The Internet and the Web
- IT 231 Web Development I
- IT 232 Web Development II
- IT 240 Introduction to Desktop Databases
- IT 263 Applied Networks and Security
- IT 330 User Interface Development for Interactive Systems
- 6 Liberal Studies

**Second Year**
- CSC 211 Programming in Java I
- CSC 212 Programming in Java II
- CSC 383 Data Structures and Algorithms in Java
- CSC 352 Database Programming
- IT 215 Analysis and Design Techniques
- IT 223 Data Analysis
- WRD 204 Technical Writing
- or WRD 301 Writing in Workplace Contexts
- 5 Liberal Studies

**Third Year**
- CNS 340 Fundamentals of Information Assurance
- IS 372 Fundamentals of Software Project Management
- MKT 301 Principles of Marketing
CSC 373  Computer Systems I  
or ECT 365  Web Server Operations  
or TDC 311  Computers in Telecommunications Systems  
ORGC 212  Small Group Communication  
or INTC 220  Public Speaking  
5 Liberal Studies  
1 Major Elective

**Fourth Year**

ACC 101  Introduction to Accounting I  
or FIN 290  Finance for Non-Commerce Majors  
CSC 394  Software Projects (Capstone)  
or any other CDM capstone course  
3 Liberal Studies  
3 Major Electives  
5 Open Electives

**Major Electives**

Students must earn a grade of C- or higher in all major elective courses.

Major Electives can be chosen from any **300 level CDM courses**. At most one of the electives can be chosen from the list below:

ANI 201  Animation I  
ANI 230  3D Design & Modeling  
ANI 231  3D Animation  
ANI 240  Animation Production I  
GAM 244  Game Development I  
GAM 245  Game Development II  
GPH 211  Perceptual Principles for Digital Environments I  
GPH 212  Perceptual Principles for Digital Environments II  
GPH 213  Perceptual Principles for Digital Environments III  
GPH 250  Digital Modeling I  
GPH 259  Design Geometry  
IM 210  Introduction to Human-Computer Interaction  
IM 270  User-Centered Web Design  
IT 320  Content Management Systems

**Open Electives**

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a **CDM minor or other minors** are normally credited as open electives.

**Degree Requirements**

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)  
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)  
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude  
- between 3.700 and 3.849 will be graduated magna cum laude  
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the **DePaul**
Interactive Media (Joint with CIM)

The B.S. in Interactive Media degree prepares students for the expanding field of interaction design and its application to multimedia and web development. The base program integrates technical and artistic disciplines. Technical concepts and skills involve web markup languages, interactive scripting and human-centered design. The student also explores artistic areas of study such as communication design, animation, game design and cinema. A major in interactive media provides students with broad skills and expertise including:

- Develop well-designed web pages, sites, and interactive applications
- Design, code and create content for casual games
- Conduct usability tests for interactive web sites
- Employ visual design principles to express ideas and concepts
- Create prototypes for interactive displays

Online Learning Options

Many courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the BS degree in Interactive Media:

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>Required*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required:</td>
</tr>
<tr>
<td></td>
<td>- DC 205</td>
</tr>
<tr>
<td></td>
<td>- 2 Additional Courses</td>
</tr>
</tbody>
</table>
| Philosophical Inquiry (PI) | 2 Courses Required:  
| - CSC 208 or IT 228  
| - 1 Additional Course |
| Religious Dimensions (RD) | 2 Courses Required |
| Scientific Inquiry (SI) | 1 SI Lab Course Required |
| Self, Society and the Modern World (SSMW) | 3 Courses Required:  
| - PSY 105  
| - 2 Additional Courses |
| Understanding the Past (UP) | 2 Courses Required |

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of these course requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**

- ANI 101 Animation for Non-Majors
- or ANI 201 Animation I
- GD 105 Intro to Visual Design
- IT 130 The Internet and the Web
- IT 240 Introduction to Desktop Databases
- IM 270 User-Centered Web Design
- GD 200 Art and Design I: History, Concept, Structure

6 Liberal Studies

**Second Year**

- IT 231 Web Development I
- IM 210 Introduction to Human-Computer Interaction
- IM 220 Interactive Media I
- IM 230 Scripting for Interactive Media
- IT 223 Data Analysis
- ANI 230 3D Design & Modeling
- GD 230 Typography I

5 Liberal Studies

**Third Year**

- IM 320 Interactive Media II
- IM 330 Advanced Scripting for Interactive Media
- IM 360 User-Centered Evaluation
- GAM 244 Game Development I
- WRD 204 Technical Writing

4 Liberal Studies

3 Major Electives
Fourth Year
IM 394 Human-Computer Interaction Capstone
or CSC 394 Software Projects (Capstone)
4 Liberal Studies
2 Major Elective
5 Open Electives

Major Electives

Major electives can be chosen from the following list
Any 200- or 300-level CDM, ART or CMN course.

Any of the following:
PSY 241 Research Methods I
PSY 242 Research Methods II
PSY 360 Theories of Learning and Cognition
PSY 375 Sensation and Perception
PSY 380 Industrial and Organizational Psychology
PSY 383 Psychology of Design

Students must earn a grade of C- or higher in all major elective courses.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Mathematics / Computer Science (Joint with LA&S)

The B.S. in Math and Computer Science is a joint degree between the College of Computing and Digital Media and the Department of Mathematics. It provides challenging opportunities to exceptional students with an interest in the highly theoretical nexus of math and computer science. Mathematics is a key element to the theory and practice of computer science and technology:

- Number theory forms the basis for encryption algorithms for messages sent over the Internet.
- Facts from projective geometry and multivariable calculus underlie the computer algorithms that control computer animation.
- Properties of abstract groups are instrumental in correcting transmission errors that occur when
information is sent from one computer to another.
- Graph theory and combinatorics are used to create algorithms for Internet search engines and analyze Internet routing protocols.

This program is intended to appeal to academically talented students. It is designed to prepare them for graduate study in various areas of computer science such as theoretical computer science, graphics, data analysis, artificial intelligence, and computational methods and in areas in applied mathematics such as numerical analysis or discrete mathematics. The program is also designed to prepare students to compete for the more theoretical complex jobs found in computer software development.

Students in the program will explore a broad range of fields including:

- Theory of computation
- Computational mathematics
- Artificial intelligence
- Data analysis
- Graphics
- Computer vision

It is highly recommended that students concentrate on one or two areas for their advanced classes to achieve depth, but they are not required to do so. Faculty advisors are available to assist students in their selection.

Online Learning Options

Some courses in this degree are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

Liberal Studies

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the BS degree in Math and Computer Science.

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>CSC 394* or MAT 398* or GPH 395*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
</tbody>
</table>
Understanding the Past
(UP)

2 Courses Required

Notes:
1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)
* Students must earn a C- or better in this course.

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year
CSC 241 Introduction to Computer Science I
CSC 242 Introduction to Computer Science II
CSC 224 Java for Programmers
or CSC 309 Object-Oriented Programming in C++
6 Liberal Studies

In addition, students must complete one of the following three-course sequences:

Calculus Sequence (option 1)
MAT 150 Calculus I
MAT 151 Calculus II
MAT 152 Calculus III

Calculus for Mathematics and Science Majors Sequence (option 2)
MAT 160 Calculus for Mathematics and Science Majors I
MAT 161 Calculus for Mathematics and Science Majors II
MAT 162 Calculus for Mathematics and Science Majors III

Calculus with Scientific Applications Sequence (option 3)
MAT 170 Calculus I with Scientific Applications
MAT 171 Calculus II with Scientific Applications
MAT 172 Calculus III with Differential Equations

Second Year
CSC 383 Data Structures and Algorithms in Java
or CSC 393 Data Structures in C++
CSC 373 Computer Systems I
CSC 374 Computer Systems II
MAT 140 Discrete Mathematics I
MAT 141 Discrete Mathematics II
MAT 260 Multivariable Calculus I
6 Liberal Studies

Third Year
MAT 262 Linear Algebra
4 Liberal Studies
2 CDM Major Electives
2 MAT Major Electives
3 Open Electives
Fourth Year
CSC 321  Design and Analysis of Algorithms
CSC 394  Software Projects (Capstone)
or GPH 395  Computer Graphics Senior Project (Capstone)
or MAT 398  Senior Capstone Seminar (Capstone)

3 Liberal Studies
1 CDM Major Elective
1 MAT Major Elective
1 CDM or MAT Major Elective
4 Open Electives

Major Electives

Students must earn a grade of C- or higher in all major elective courses.

Of the 7 Major Field electives courses, 3 must be taken from the CDM Major Electives List, 3 must be taken from the MAT Major Electives List, and 1 could be taken from either lists.

Major Electives can be chosen from the grouped list below. It is recommended that students concentrate on one or two areas for their advanced classes to achieve depth, but they are not required to do so. Students are strongly encouraged to discuss course selection with an advisor. Students may wish to arrange with a professor to take an independent study or a research experience (MAT 399 or CSC 399 or IT 300) in order to explore a subject more deeply than is possible in a scheduled course.

Theory of Computation
The courses in the theory area explore the mathematical and logical foundations of computer science.
MAT 302  Combinatorics
MAT 303  Theory of Numbers
MAT 351  Probability and Statistics I
MAT 310  Abstract Algebra I
MAT 311  Abstract Algebra II
MAT 312  Abstract Algebra III
MAT 335  Real Analysis I
MAT 372  Logic and Set Theory
CSC 235  Problem Solving
CSC 327  Problem Solving for Contests
CSC 333  Cryptology
CSC 344  Automata Theory and Formal Grammars
CSC 347  Concepts of Programming Languages
CSC 348  Introduction to Compiler Design
CSC 387  Operations Research I: Linear Programming
or MAT 387  Operations Research I: Linear Programming
CSC 369  Scientific Computing
CSC 389  Theory of Computation

Computational Methods Area
The computational methods area investigates quantitative and computational methods in computer science.
CSC 331  Scientific Computing
CSC 385  Numerical Analysis
or MAT 385  Numerical Analysis I
CSC 386  Advanced Numerical Analysis
or MAT 386  Numerical Analysis II
MAT 330  Methods of Computation and Theoretical Physics I
MAT 331  Methods of Computation and Theoretical Physics II
MAT 384  Mathematical Modeling
**Artificial Intelligence**
For students with an interest in the computational relations between syntax and semantics.
CSC 380  
Foundations of Artificial Intelligence
CSC 357  
Expert Systems
CSC 358  
Symbolic Programming

**Data Analysis Area**
For students who are interested in statistical and computational analysis of data. Many of the courses in this area require the student to take MAT 351-353.
CSC 328  
Data Analysis for Experimenters
CSC 334  
Advanced Data Analysis
or MAT 354  
Multivariate Statistics
CSC 332  
Simulation and Modeling
or MAT 359  
Simulation and Models and the Monte Carlo Method
CSC 367  
Introduction to Data Mining
MAT 261  
Multivariate Calculus II
MAT 351  
Probability and Statistics I
MAT 352  
Probability and Statistics II
MAT 353  
Probability and Statistics III
MAT 355  
Stochastic Processes
MAT 357  
Nonparametric Statistics
MAT 370  
Advanced Linear Algebra
MAT 356  
Applied Regression Analysis
MAT 358  
Applied Time Series and Forecasting

**Graphics Area**
The graphics courses are intended for students who want to study the technical and mathematical foundations of computer graphics and animation.
MAT 337  
Complex Analysis
MAT 261  
Multivariable Calculus II
CSC 385  
Numerical Analysis
or MAT 385  
Numerical Analysis I
GPH 211  
Perceptual Principles for Digital Environments I
GPH 212  
Perceptual Principles for Digital Environments II
GPH 325  
Survey of Computer Graphics
GPH 329  
Computer Graphics Development II
GPH 336  
Smooth Surface Modeling for Graphics and Animation
GPH 372  
Principles of Computer Animation

**Computer Vision Area**
Computer vision studies the mathematical and algorithmic underpinnings of image analysis and image processing.
MAT 261  
Multivariable Calculus II
MAT 335  
Real Analysis I
MAT 381  
Fourier Analysis and Special Functions
MAT 370  
Advanced Linear Algebra
MAT 384  
Mathematical Modeling
CSC 381  
Introduction to Digital Image Processing
CSC 382  
Applied Image Analysis
CSC 384  
Introduction to Computer Vision

**Open Electives**
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under
the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

**Degree Requirements**

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

**Network Technologies**

In the **B.S. in Network Technologies** students will learn the theory and practice of designing, deploying and managing both wired and wireless networks technologies, including broadband Internet access technologies, interconnection technologies, network convergence, and network security. The program provides a combined emphasis on both foundational theory and hands-on experience that allow students to design, configure, and manage equipment and services in a variety of network environments. Students gain experience with network devices and servers in lab facilities focused on enterprise network, security, and multimedia network services. The Network Technologies program provides students with expertise in:

- The protocols and services that enable Internet and LAN services
- The design and management of local and wide area network
- Voice and data network convergence through VoIP technologies
- Wireless networks (WiFi, WiMAX, Cellular, and 3G)
- Network security

**Online Learning Options**

Many courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

**Concentrations**

**Standard**

This concentration is geared toward students who are considering careers in network design, system management, service deployment, and product/vendor evaluation. The course work focuses on network technologies, protocol studies, device configuration, and network design.

**Network Security**

This concentration is geared toward students who are considering careers in network security, security administration, and security infrastructure design. The course work focuses on network security technologies, best practices in security design, and security management.

**Application Development**

This concentration is geared toward students who are considering careers in application development for
network services with course work focused on software development and network programming, in addition to network technologies and protocols.

**Standard Concentration**

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Network Technologies (Standard Concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
</tr>
</tbody>
</table>

**Notes:**

- 1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)
- * Students must earn a C- or better in this course.

**First Year**

- IT 201 Introduction to Information Systems
- IT 130 The Internet and the Web
- IT 240 Introduction to Desktop Databases
- IT 263 Applied Networks and Security
IT 231 Web Development I
MAT 140 Discrete Mathematics I
6 Liberal Studies

**Second Year**
IT 223 Data Analysis
TDC 311 Computers in Telecommunications Systems
TDC 362 Principles of Data Communications
WRD 204 Technical Writing
or WRD 301 Writing in Workplace Contexts
CSC 211 Programming in Java I
and CSC 212 Programming in Java II
or CSC 261 Programming in C++ I
and CSC 262 Programming in C++ II
6 Liberal Studies

**Third Year**
TDC 363 Introduction to Local Area Networks
TDC 364 Voice Communications Technologies
TDC 365 Network Interconnection Technologies
ORGC 212 Small Group Communication
or INTC 220 Public Speaking
4 Liberal Studies
1 Major Elective
3 Open Electives

**Fourth Year**
TDC 376 Network Project (Capstone)
3 Liberal Studies
2 Major Electives
6 Open Electives

**Major Electives**

Major electives can be chosen from any **300 level TDC courses**.

Students must earn a grade of C- or higher in all major elective courses.

**Open Electives**

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a **CDM minor or other minors** are normally credited as open electives.

**Degree Requirements**

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the [DePaul Undergraduate Handbook](#).
Network Security Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Network Technologies (Network Security Concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
</tr>
<tr>
<td>Focal Point</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
</tr>
</tbody>
</table>

**Notes:**
- 1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)
- * Students must earn a C- or better in this course.

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of these course requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

<table>
<thead>
<tr>
<th>First Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 201</td>
</tr>
<tr>
<td>IT 130</td>
</tr>
<tr>
<td>IT 240</td>
</tr>
<tr>
<td>IT 263</td>
</tr>
<tr>
<td>IT 231</td>
</tr>
<tr>
<td>MAT 140</td>
</tr>
</tbody>
</table>

6 Liberal Studies
Second Year
CSC 261  Programming in C++ I
CSC 262  Programming in C++ II
TDC 311  Computers in Telecommunications Systems
TDC 362  Principles of Data Communications
CNS 340  Fundamentals of Information Assurance
WRD 204  Technical Writing
or WRD 301  Writing in Workplace Contexts
6 Liberal Studies

Third Year
TDC 363  Introduction to Local Area Networks
TDC 365  Network Interconnection Technologies
TDC 377  Fundamentals of Network Security
ORGC 212  Small Group Communication
or INTC 220  Public Speaking
7 Liberal Studies
1 Major Elective

Fourth Year
CNS 378  Host and Information Security
TDC 379  Telecommunication and Network Security Practicum
TDC 375  Network Protocols
TDC 368  Network Programming
TDC 376  Network Project (Capstone)
1 Major Elective
6 Open Electives

Major Electives
Major electives can be chosen from any 300 level TDC courses.

Students must earn a grade of C- or higher in all major elective courses.

Open Electives
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements
Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Application Development Concentration
The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students
The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Network Technologies (Application Development Concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
</tr>
<tr>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
</tr>
<tr>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
</tr>
<tr>
<td>Not Required</td>
</tr>
<tr>
<td>Sophomore Year</td>
</tr>
<tr>
<td>Multiculturalism in the US</td>
</tr>
<tr>
<td>LSP 200</td>
</tr>
<tr>
<td>Junior Year</td>
</tr>
<tr>
<td>Experiential Learning</td>
</tr>
<tr>
<td>Required</td>
</tr>
<tr>
<td>Senior Year</td>
</tr>
<tr>
<td>Capstone</td>
</tr>
<tr>
<td>TDC 376*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
</tr>
<tr>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
</tr>
<tr>
<td>2 Courses Required</td>
</tr>
<tr>
<td>(See note below)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
</tr>
<tr>
<td>2 Courses Required</td>
</tr>
<tr>
<td>(See note below)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
</tr>
<tr>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
</tr>
<tr>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
</tr>
<tr>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Notes:</td>
</tr>
<tr>
<td>1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)</td>
</tr>
<tr>
<td>* Students must earn a C- or better in this course.</td>
</tr>
</tbody>
</table>

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees. The representation of these course requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

<table>
<thead>
<tr>
<th>First Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 201 Introduction to Information Systems</td>
</tr>
<tr>
<td>IT 130 The Internet and the Web</td>
</tr>
<tr>
<td>IT 240 Introduction to Desktop Databases</td>
</tr>
<tr>
<td>IT 263 Applied Networks and Security</td>
</tr>
<tr>
<td>IT 231 Web Development I</td>
</tr>
<tr>
<td>MAT 140 Discrete Mathematics I</td>
</tr>
<tr>
<td>6 Liberal Studies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Year</th>
</tr>
</thead>
</table>

Note: Students must earn a D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Network Technologies (Application Development Concentration):
CSC 211 Programming in Java I
and CSC 212 Programming in Java II
or CSC 261 Programming in C++ I
and CSC 262 Programming in C++ II
TDC 311 Computers in Telecommunications Systems
TDC 362 Principles of Data Communications
IT 223 Data Analysis
WRD 204 Technical Writing
or WRD 301 Writing in Workplace Contexts
6 Liberal Studies

Third Year
TDC 363 Introduction to Local Area Networks
TDC 365 Network Interconnection Technologies
CSC 309 Object-Oriented Programming in C++
or CSC 224 Java for Programmers
CSC 383 Data Structures and Algorithms in Java
or CSC 393 Data Structures in C++
TDC 368 Network Programming
ORGC 212 Small Group Communication
or INTC 220 Public Speaking
4 Liberal Studies
1 Major Elective
1 Open Elective

Fourth Year
TDC 375 Network Protocols
TDC 376 Network Project (Capstone)
3 Liberal Studies
1 Major Elective
6 Open Electives

Major Electives
Major electives can be chosen from any 300 level TDC courses.
Students must earn a grade of C- or higher in all major elective courses.

Open Electives
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements
Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook
About the School of Cinema and Interactive Media

The School of Cinema and Interactive Media (CIM) houses CDM's creative degrees. With an emphasis on all aspects of production, students can earn degrees that prepare them for work in digital cinema, animation, computer game development, and interactive media.

Faculty

SHIRO AKIYOSHI
Associate Professor

MEGHANN ARTIES, M.F.A.
Assistant Professor
University of California Los Angeles

LISA BARCY, M.A.
Instructor
Columbia College

DEVIN BELL, M.F.A.
Assistant Professor
California Institute of the Arts

KRISTYN BENEDYK, M.F.A.
Assistant Professor
University of Southern California

ROBIN BURKE, Ph.D.
Associate Professor
Northwestern University

SHAYNA CONNELLY, M.F.A
Instructor
Columbia College

JOHANNA DERY, M.F.A
Assistant Professor
Goddard College

RONALD ELTANAL, M.F.A.
Associate Professor
University of Southern California

SCOTT ERLINDER, M.F.A.
Assistant Professor
Columbia College

RONALD FERNANDEZ, M.F.A.
Assistant Professor
University of Southern California
DANA HODGDON, M.A.
Associate Professor
Northwestern University

MATT IRVINE, M.F.A.
Associate Professor
Columbia College

JOSHUA JONES, M.F.A.
Assistant Professor
University of Southern California

STEVEN JONES, B.S.
Producer in Residence
Illinois Institute of Technology

DANIEL KLEIN, B.F.A.
Instructor
New York University

JOSEPH LINHOFF, J.D.
Assistant Professor
University of Colorado at Boulder School of Law

THOMAS MUSCARELLO, Ph.D.
Associate Professor
University of Illinois at Chicago

GARY NOVAK, M.F.A.
Assistant Professor
American Film Institute

THOMAS O’HAVER
Director in Residence

SAVVAS PARITSIS
Assistant Professor

ERNESTO PEREZ, B.F.A.
Instructor
University of Illinois Urbana-Champaign

NICHOLE PINKARD, Ph.D.
Associate Professor
Northwestern University

MATT QUINN, M.F.A.
Instructor
Loyola Marymount University in Los Angeles

SCOTT ROBERTS, M.F.A.
Associate Professor
University of Wisconsin - Madison

KATIE SALEN, M.F.A.
Professor
Rhode Island School of Design

ROBERT STEEL, M.A.
Instructor
Northwestern University

ALEXANDER STEWART, M.F.A.
Assistant Professor
The Liberal Studies Program is the common curriculum taken by all students in the seven undergraduate colleges of DePaul University. Overall, the Program is designed to develop students' writing abilities, computational and technological proficiencies, and critical and creative thinking skills.

Each major in the University has unique Liberal Studies requirements. Please consult the Liberal Studies catalog for your relevant requirements as a CDM student as well as for information about the Modern Language Option.

CDM offers dozens of courses in many domains of the Liberal Studies Program. You can experiment with Screenwriting, Digital Photography, Game Design, Computer Graphics and Programming and fulfill a requirement at the same time. Many of these courses also serve as gateway courses into more advanced CDM courses. Courses can be grouped in two lists:

- Liberal Studies Course Offered by CDM
- CDM Liberal Studies Courses Offered by CDM - Grouped by Topic

Click to view Restrictions for CDM Students

Liberal Studies Courses Offered by CDM
This list represents Liberal Studies Program (LSP) courses taught by CDM only. For a complete list of LSP courses, visit the Liberal Studies homepage.

- Arts and Literature
  - ANI 101 Animation for Non-Majors
    Course introduces a variety of basic animation techniques for cinema and gaming, such as hand-drawn, cutout, stop-motion and (very basic) 3D, with an emphasis on the use of computer
drawn, cutout, stop-motion and (very basic) 3D, with an emphasis on the use of computer technology.

- **ANI 206 History of Animation**
  History of Animation: This course is an introduction to the history and development of the field of animation.

- **DC 113 Audio for Podcasts and Other Media**
  This course is an introduction to the uses and practical applications of sound for multimedia. Students will study various uses of sound and music on the Internet from creative to professional websites. Using free or inexpensive hardware and software, students will learn to create and edit podcasts and attach audio files to programs and web pages such as Facebook, Itunes, Keynote, PowerPoint and other sites. The course will cover both Mac and PC applications so all students will be able to work on projects from their home computers. The course will also cover current legalities of digital media.

- **DC 202 History of Motion Picture Editing**
  This course studies the origins and rise of film editing as an art form, an industry, a set of technological practices ranging from analog film to digital video. The course examines critical historical events that impacted film editing: the emergence of the studio system, the coming of sound, narrative, experimental and documentary film, MTV, and audience shifts. For many, editing is the unique source of the art of filmmaking. This course addresses this question.

- **DC 125 Digital Still Photography for Non-Majors**
  This course is an introduction to the history and aesthetics of still photography and to the concept of photography as a descriptive and interpretive artistic medium. Students studying photographs in this context will discover relationships between individual photographers' choices and their own understanding of meaning. Students will learn the fundamental concepts necessary to shoot, edit, manipulate, and print digital still photographs.

- **DC 120 Video Editing**
  Students analyze and assemble dramatic scenes under a variety of conditions and narrative strategies. Editing theories, techniques, and procedures, issues of continuity, effects, movement and sound are examined as they relate to the fundamentals of cinematic montage and visual storytelling. This class present a variety of topics and experiences that are designed to broaden the student’s understanding of the art of cinematic storytelling and montage. Work on more advanced projects is integrated into the class as a means to an understanding of advanced editing tools and techniques.

- **DC 201 Introduction to Screenwriting**
  This course focuses on narrative storytelling and encourages students to find their unique voices, while emphasizing the critical importance of working as part of a creative team.

- **DC 205 Foundations of Cinema**

- **DC 207 History of Cinema I, 1890-1945**
  This course examines the history of cinema as one of the most influential cultural forms of the 20th Century. We will study the aesthetic and technological developments of cinema during its first 50 years, as well as examine the social and economic factors shaping its history. Initially influenced by the other art forms (theater, literature, painting) filmmaking quickly acquired its own formal system, language, and traditions. We will trace the changing styles, techniques, content, and methods of filmmaking as an art form as popular culture, and as an industry. We will consider how cinema is bound to its social context via audience relations, economics, technology, and ideology. The limited scope of this course will cover primarily feature-length, narrative films as the dominant mode of filmmaking, although we will also look at the development of documentary and experimental filmmaking. The class will consist of lectures, screenings, and discussions.

- **DC 208 History of American Cinema, 1946-1975**
  From Film Noir to Hitchcock, an examination of post war Hollywood, film noir, wide screen and epic films, the development of the star system, the director as autuer, and the influence of international film movements and directors. Screenings, lecture, and discussion.

- **DC 209 History of Cinema, 1975-Present**
  This final course in the film history sequence is designed to introduce students to a sense of modern film history and the multiple permutations of cinema around the modern film history and the multiple permutations of cinema around the globe. It presents film history from a global perspective, concentrating primarily on the development of new national and transnational cinemas. The course continues to chart the development of the American studios since the mid-1970s while examining the effects of media consolidation and convergence. Moreover, the course seeks to examine how global cinemas have reacted to and dealt with the formal
influence and economic domination of Hollywood filmmaking on international audiences. Class lectures, screenings, and discussions will consider how cinema has changed from a primarily national phenomenon to a transnational form of communication in the 21st century.

- **DC 222 Story Structure in Cinema**
  This course focuses on the critical analysis of narrative structure in Cinema. Students will learn how to identify key story concepts and break down three act structure in finished films and scripts.

- **DC 233 Cinema & Art**
  This course will provide an overview of avant-garde film, video, animation and installation, and the relationship of these cinematic forms to Modern and Contemporary art.

- **DC 250 Working with Actors 1**
  This course is an introduction and examination of the collaborative process between the actor and director. Methods of study include lecture, discussion, assignments, and in-class acting exercises.

- **GAM 224 Introduction to Game Design**
  Students will learn about a game's "hook", its "high concept" and the crucial needs of marketing for a successful game design. Students will also learn to design a game's component pieces.

- **GD 200 Graphic Design I**
  This course introduces the world of graphic design in a social and historical context. The goals are to explore formal structures and research methods with emphasis on the role of analysis and conceptual thinking as the first tasks of the print and multi-media designer. The course includes basic instruction in typography, color, problem-solving in print and on screen.

- **GD 220 History of Design I**
  The history of graphic design is an evolution in aesthetics, technology, style and visual communication. The class will encompass a survey of the major movements in the field of print design, notable designers and design materials. The nature of changing methods, materials, technologies and values are examined in the context of the social and political realities that shape communication. The course will include the historical shift from print to multimedia design methodologies.

- **GPH 211 Perceptual Principles for Digital Environments I**
  An introduction to the visual, non-verbal principles incorporated in the effective presentation of on-screen environments. This course emphasizes the use of two-dimensional elements and their organization.

- **GPH 212 Perceptual Principles for Digital Environments II**
  Further experience with the visual, non-verbal principles incorporated in effective presentation of on-screen environments. This course emphasizes the use of three dimensional elements, spaces and their organization.

- **GPH 213 Perceptual Principles for Digital Environments III**
  These three foundational courses in computer animation take you through the process of creating 2-D and 3-D representations on the computer. The last course teaches you how to animate them!

- **Junior Experiential Learning Credit**
  - **CSC 298 Internship**
    Computer Science Internship in cooperation with local employers this course offers students the opportunity to integrate their academic experience with on-the-job training in computer related work areas.
  - **CSC 378 Software Projects for Community Clients**
  - **CSC 379 Technology Partnerships in Urban Schools**
    Students in this course will have the opportunity to assess urban community needs in the technology arena and develop skills in assisting and developing methods for bridging the digital divide that exists.
  - **DC 298 Internship in Media Production/Post-Production**
    This course offers students an excellent opportunity to gain professional experience, industry contacts, and referrals while still in school. Opportunities in post-production, motion picture production, advertising, television, animation, motion graphics and interactive media. Admission to the program requires consent of internship course instructor. Current work experience plus classroom time is required. Supervisor evaluation will contribute to the final grade.
  - **DC 380 Project Bluelight**
    Production of a feature-length digital motion picture written by students or faculty within the Digital Cinema program.
  - **GD 380 Design for Client and Community**
    This course enables students to work from start to finish on client-based graphic design and
projects. Students establish working relationships as individuals and in teams that utilize their
skills to effectively evaluate the communication needs of an organization or business, develop
design solutions that fulfill those needs, and negotiate the process between designers and clients.

- **GPH 360 Modeling Spaces**
  The digital design and modeling of environmental spaces with attention to human use
  parameters.

- **IT 300 Research Experience**
  This course involves the exploration of a research topic under the supervision of a research
  advisor.

- **IT 398 Topics in Global Information Technology**
  This course focuses on current topics in the information and communications technologies that
together support the "networked world." Sample topics are global software development and
  deployment, global data and information management, and cross-cultural project management
  for information systems. The course may be offered for variable credit hours (2, 4, 8, 16, and 32).

**Scientific Inquiry**

- **CSC 200 Survey of Computing**
  Learn about careers using computers and pick up some skills to help you manage your own PC or
  network!

- **CSC 211 Programming in Java I**
  **CSC 212 Programming in Java II**
  Two courses in programming JAVA, a cross-platform, web-enabled language.

- **CSC 233 Codes and Ciphers**
  A history of code making and breaking and the math and (computer) science behind it

- **CSC 235 Problem Solving**
  How do you solve a problem? In this course we discuss different problem solving techniques and
  strategies such as modeling, establishing subgoals, and searching and pruning.

- **CSC 239 Personal Computing**
  You will learn how to use Excel to analyze data and how to publish data and retrieve it from the
  World Wide Web.

- **CSC 250 Computers and Human Intelligence**
  Students taking this course will study human problem-solving and its simulation by computers.
  Artificial intelligence, pattern recognition and learning programs will be discussed.

- **CSC 255 Information Structures and Representations**
  Students learn about data representation, machine architecture concepts, algorithms, data
  structures including arrays, stacks, linked lists, trees.

- **CSC 261 Programming in C++ I**
- **CSC 262 Programming in C++ II**
  Two courses in programming C++

- **ECT 250 Internet, Commerce, and Society**
  Ever shop online? Learn the basics behind how these kinds of web sites function

- **HCI 201 Multimedia and the World Wide Web**
  Overview of the Web, its origins and capabilities. Create your own sample web page.

- **IM 222 Information Visualization**
  This course discusses the basic problems and techniques of visualizing quantitative and
  qualitative data.

- **IT 130 The Internet and the Web**
  Learn to design your own web site!

- **IT 223 The Internet and the Web**
  Application of statistical concepts and techniques to a variety of problems in IT areas and other
  disciplines, using a statistical package for simple data analysis.

- **IT 236 User Interface Development**
  The focus of the course is to build interfaces to simple
  programs. The course will cover interface controls, event handling, and the use of built in and/or
  pre-written controls. The course will cover simple database access through a Database control
  and possibly access to WebServices such as Google. Good visual design principles will be
  emphasized throughout the course.

- **IT 240 Introduction to Desktop Databases**
  Learn introductory concepts in constructing databases and networking files.

- **IT 263 Applied Networks and Security**

- **TDC 261 Basic Communication Systems**
  Learn about how networks work and how they impact your daily life.
• **Scientific Inquiry: Lab**
  - **DC 274 Image, Optics and Cinematic Motion**
    Cinematography is the scientifically-grounded discipline of making lighting and camera choices in order to record moving images. This course deals with the basic mathematics, physics, and photochemistry that underlie cinematography and that motivate camera design and construction. A student who masters the foundations of cinematography through a mixture of lectures, readings, exercises, and labs will be able to evaluate and understand how motion-based recording choices affect perception of moving images they see every day.
  - **GPH 259 Design Geometry (cross-listed as ART 295)**
    Learn the basics of Computer Aided Design.

• **Self, Society, and the Modern World**
  - **CSC 223 The Impact of Computing Technology On Our Lives**
    This course will introduce students to an overview of social analysis techniques and the theories of social change.
  - **DC 105 Digital Media Literacies**
    This course is designed to help students develop an informed, critical and practical understanding of new communication media, including ways to read, write and produce in a digital environment.
  - **DC 235 Adaptation: The Cinematic Recrafting of Meaning**
    This course explores contemporary cinematic adaptations of literature and how recent reworkings in film open viewers up to critical analysis of the cultural practices surrounding the promotion and reception of these narratives.
  - **GAM 208 or IM 208 Virtual Worlds and Online Communities**
    Environments such as social networking sites, multiplayer online games and other online communities are becoming an increasingly large part of how we work, plan, and learn. This course introduces the fundamentals for the interdisciplinary study of cyberculture and online social behavior. By examining core scholarship in this area, together with analyzing an existing virtual world, game, or online community, students will learn to research and understand new technologically-enabled social forms as they are emerging.
  - **IS 208 IT, Economy and Society**
    This course broadly surveys the history of IT applications and information systems from the historical perspective, and critically assesses the digital impact on industry, the economy, workers, citizens, social class and the future.
  - **IT 201 Introduction to Information Systems**
    This course examines how various types of computer-based information systems form a critical part of modern organizations, how they work, and how they impact workers, organizations and the economy.

• **Understanding the Past**
  - **GAM 206 History of Games**
    This class will examine particular games and game genres in their historical context using a case study format.
  - **GPH 205 Historical Foundations of Visual Technology**
    This course is a survey of the development, application and meaning of visual technologies in a wide range of world cultures from pre-history to the present.

• **Philosophical Inquiry**
  - **CSC 208 Ethics in Technology**
    This course will research the impact technology has had in various areas of our lives, the new responsibilities technology presents, and our ability to deal with these changes in an ethical manner.
  - **DC 227 Film Philosophy**
    This course is a seminar on the philosophical analysis of film art, with an emphasis on the ways in which it creates meaning through techniques that define a formal structure. There is a particular focus on aesthetic problems about appearance and reality, literacy and visual effects, communication and alienation through film technology.
  - **DC 228 or GAM 228 or IT 228 Ethics in Computer Games and Cinema**
    Societies function based on normative ethics utilizing common sense to distinguish between
ethics and unethical behavior. Most of us are not aware of the underlying theories when arriving at ethical judgments about right and wrong. However, the fast pace of progress in information technologies and digital entertainment creates an environment, in which ethical challenges are particularly complex. In the eyes of many, games and movies are violent, offensive and immoral. This course will concentrate on analyzing the impact of digital entertainment on an individual and society. Implications of certain values embedded in games and movies will be discussed. Elements of the ethical code of conduct for a game or movie creator will be formulated. The issue of balancing individual creativity vs. cultural impact, particularly on children, will be discussed.

CDM Liberal Studies Courses Offered by CDM - Grouped by Topic

- **The Internet and How It Works**
  - **CSC 200 Survey of Computing: Scientific Inquiry: Elective**
    Learn about Careers using computers and pick up some skills to help you manage your own PC or network!
  - **CSC 211 Programming in Java I : Scientific Inquiry: Elective**
  - **CSC 212 Programming in Java II: Scientific Inquiry: Elective**
    Two courses in programming JAVA, a cross-platform, web-enabled language.
  - **CSC 255 Information Structures and Representations**
    Students learn about data representation, machine architecture concepts, algorithms, data structures including arrays, stacks, linked lists, trees.
  - **CSC 261 Programming in C++ I**
  - **CSC 262 Programming in C++ II**
    Two courses in programming C++.
  - **ECT 250 Internet, Commerce, and Society: Scientific Inquiry: Elective**
    Ever shop at Gap.com? Learn the basic behind how these kinds of web sites function.
  - **HCI 201 Multimedia and the World Wide Web: Scientific Inquiry: Quantitative**
    Overview of the Web, its origins and capabilities. Create your own sample web page.
  - **IT 130 The Internet and the Web**
    Learn to Design Your Own Website
  - **IT 263 Applied Networks and Security**
    The focus of the course is to build interfaces to simple programs. The course will cover interface controls, event handling, and the use of built in and/or pre-written controls. The course will cover simple database access through a Database control and possibly access to WebServices such as Google. Good visual design principles will be emphasized throughout the course.
  - **TDC 261 Basic Communication Systems**
    Introduction to voice, data, and multi-media network communications fundamentals. Wired, Wireless, and Optical applications in Local, Metropolitan, Wide Area Networks are explored. The overview explains how technical, regulatory, competitive, standardization and cultural factors impact modern network applications.

- **The Computer and Society**
  - **CSC 208 Ethics in Technology**
    This course will research the impact technology has had in various areas of our lives, the new responsibilities technology presents, and our ability to deal with these changes in an ethical manner.
    This course will introduce students to an overview of social analysis techniques and the theories of social change.
  - **CSC 250 Computers and Human Intelligence**
    Students taking this course will study human problem-solving and its simulation by computers. Artificial intelligence, pattern recognition and learning programs will be discussed.
  - **GAM 208 or IM 208 Virtual Worlds and Online Communities**
    Environments such as social networking sites, multiplayer online games and other online communities are becoming an increasingly large part of how we work, plan, and learn. This course introduces the fundamentals for the interdisciplinary study of cyberculture and online social behavior. By examining core scholarship in this area, together with analyzing an existing virtual world, game, or online community, students will learn to research and understand new technologically-enabled social forms as they are emerging.
  - **IS 208 IT Economy and Society**
Economy and Society

This course broadly surveys the history of IT applications and information systems from the historical perspective, and critically assesses the digital impact on industry, the economy, workers, citizens, social class and the future.

Ⅺ  IT 201 Introduction to Information Systems

This course examines how various types of computer-based information systems form a critical part of modern organizations, how they work, and how they impact workers, organizations and the economy.

Ⅻ  DC 228 or GAM 228 or IT 228 Ethics in Computer Games and Cinema

Societies function based on normative ethics utilizing common sense to distinguish between ethical and unethical behavior. Most of us are not aware of the underlying theories when arriving at ethical judgments about right and wrong. However, the fast pace of progress in information technologies and digital entertainment creates an environment, in which ethical challenges are particularly complex. In the eyes of many, games and movies are violent, offensive and immoral. This course will concentrate on analyzing the impact of digital entertainment on an individual and society. Implications of certain values embedded in games and movies will be discussed. Elements of the ethical code of conduct for a game or movie creator will be formulated. The issue of balancing individual creativity vs. cultural impact, particularly on children, will be discussed.

Ⅺ  Computer Graphics and Motion Technology

ⅰ  ANI 101 Animation for Non-Majors

Course introduces a variety of basic animation techniques for cinema and gaming, such as hand-drawn, cutout, stop-motion and (very basic) 3D, with an emphasis on the use of computer technology

ⅰ  ANI 206 History of Animation

History of Animation: This course is an introduction to the history and development of the field of animation

ⅰ  GPH 205 Historical Foundations of Visual Technology

This course is a survey of the development, application and meaning of visual technologies in a wide range of world cultures from pre-history to the present.

ⅰ  GPH 211 Perceptual Principles for Digital Environments I : Arts and Literature

An introduction to the visual, non-verbal principles incorporated in the effective presentation of on-screen environments. This course emphasizes the use of two-dimensional elements and their organization.

ⅰ  GPH 212 Perceptual Principles for Digital Environments II : Arts and Literature

Further experience with the visual, non-verbal principles incorporated in effective presentation of on-screen environments. This course emphasizes the use of three dimensional elements, spaces and their organization

ⅰ  GPH 213 Perceptual Principles for Digital Environments III : Arts and Literature

These three foundational courses in computer animation take you through the process of creating 2-D and 3-D representations on the computer. The last course teaches you how to animate them

ⅰ  GPH 259 Design Geometry (cross-listed as ART 295)

Learn the basics of Computer Aided Design.

ⅰ  GPH 360 Modeling Spaces

The digital design and modeling of environmental spaces with attention to human use parameters

Ⅺ  Data Analysis and Retrieval

ⅰ  CSC 235 Problem Solving

How do you solve a problem? In this course we discuss different problem solving techniques and strategies such as modeling, establishing subgoals, and searching and pruning

ⅰ  CSC 239 Personal Computing: Scientific Inquiry: Quantitative

You will learn how to use Excel to analyze data and how to publish data and retrieve it from the World Wide Web.

ⅰ  IT 223 Data Analysis Application of statistical concepts and techniques to a variety of problems in IT areas and other disciplines, using a statistical package for simple data analysis.

ⅰ  IT 240 Introduction to Desktop Databases: Personal Computing for Programmers: Scientific Inquiry: Elective

Learn introductory concepts in constructing databases and networking files.

ⅰ  HCI 201 Multimedia and the World Wide Web: Scientific Inquiry: Quantitative

Overview of the Web, its origins and capabilities. Create your own sample web page

ⅰ  ECT 250 Internet, Commerce, and Society: Scientific Inquiry: Elective
Ever shop at Gap.com? Learn the basic behind how these kinds of web sites function

- **IT 130 The Internet and the Web** *(formerly ECT 270): Scientific Inquiry: Elective*
  Learn to design your own complex web site!

- **Codes, Ciphers and Computer Intelligence**
  - **CSC 233 Codes and Ciphers** : Scientific Inquiry: Elective
    A history of code making and breaking and the math and (computer) science behind it
  - **CSC 250 Computers and Human Intelligence** : Scientific Inquiry: Quantitative
    Study how computers are designed to think like people

- **Digital Cinema and Game Development**
  - **ANI 101 Animation for Non-Majors**
    Course introduces a variety of basic animation techniques for cinema and gaming, such as hand-drawn, cutout, stop-motion and (very basic) 3D, with an emphasis on the use of computer technology.
  - **ANI 206 History of Animation**
    History of Animation: This course is an introduction to the history and development of the field of animation.
  - **DC 105 Digital Media Literacies**
    This course is designed to help students develop an informed, critical and practical understanding of new communication media, including ways to read, write and produce in a digital environment
  - **DC 113 Audio for Podcasts and Other Media**
    This course is an introduction to the uses and practical applications of sound for multimedia. Students will study various uses of sound and music on the Internet from creative to professional websites. Using free or inexpensive hardware and software, students will learn to create and edit podcasts and attach audio files to programs and web pages such as Facebook, Itunes, Keynote, PowerPoint and other sites. The course will cover both Mac and PC applications so all students will be able to work on projects from their home computers. The course will also cover current legalities of digital media.
  - **DC 120 Video Editing**
    Students analyze and assemble dramatic scenes under a variety of conditions and narrative strategies. Editing theories, techniques, and procedures, issues of continuity, effects, movement and sound are examined as they relate to the fundamentals of cinematic montage and visual storytelling. This class present a variety of topics and experiences that are designed to broaden the student's understanding of the art of cinematic storytelling and montage. Work on more advanced projects is integrated into the class as a means to an understanding of advanced editing tools and techniques.
  - **DC 125 Digital Still Photography for Non-Majors**
    This course is an introduction to the history and aesthetics of still photography and to the concept of photography as a descriptive and interpretive artistic medium. Students studying photographs in this context will discover relationships between individual photographers choices and their own understanding of meaning. Students will learn the fundamental concepts necessary to shoot, edit, manipulate, and print digital still photographs.
  - **DC 201 Introduction to Screenwriting**
    This course focuses on narrative storytelling and encourages students to find their unique voices, while emphasizing the critical importance of working as part of a creative team.
  - **DC 202 History of Motion Picture Editing**
    This course studies the origins and rise of film editing as an art form, an industry, a set of technological practices ranging from analog film to digital video. The course examines critical historical events that impacted film editing: the emergence of the studio system, the coming of sound, narrative, experimental and documentary film, MTV, and audience shifts. For many, editing is the unique source of the art of filmmaking. This course adddresses this question.
  - **DC 205 Foundations of Cinema**
  - **DC 207 History of Cinema I, 1890-1945**
    This course examines the history of cinema as one of the most influential cultural forms of the 20th Century. We will study the aesthetic and technological developments of cinema during its first 50 years, as well as examine the social and economic factors shaping its history.
influenced by the other art forms (theater, literature, painting, filmmaking) quickly acquired its own formal system, language, and traditions. We will trace the changing styles, techniques, content, and methods of filmmaking as an art form as popular culture, and as an industry. We will consider how cinema is bound to its social context via audience relations, economics, technology, and ideology. The limited scope of this course will cover primarily feature-length, narrative films as the dominant mode of filmmaking, although we will also look at the development of documentary and experimental filmmaking. The class will consist of lectures, screenings, and discussions.

- **DC 208 History of American Cinema, 1946-1975**
  From Film Noir to Hitchcock, an examination of post war Hollywood, film noir, wide screen and epic films, the development of the star system, the director as autuer, and the influence of international film movements and directors. Screenings, lecture, and discussion.

- **DC 209 History of Cinema, 1975-Present**
  This final course in the film history sequence is designed to introduce students to a sense of modern film history and the multiple permutations of cinema around the modern film history and the multiple permutations of cinema around the globe. It presents film history from a global perspective, concentrating primarily on the development of new national and transnational cinemas. The course continues to chart the development of the American studios since the mid-1970s while examining the effects of media consolidation and convergence. Moreover, the course seeks to examine how global cinemas have reacted to and dealt with the formal influence and economic domination of Hollywood filmmaking on international audiences. Class lectures, screenings, and discussions will consider how cinema has changed from a primarily national phenomenon to a transnational form of communication in the 21st century.

- **DC 222 Story Structure in Cinema**
  This course focuses on the critical analysis of narrative structure in Cinema. Students will learn how to identify key story concepts and break down three act structure in finished films and scripts.

- **DC 227 Film Philosophy**
  This course is a seminar on the philosophical analysis of film art, with an emphasis on the ways in which it creates meaning through techniques that define a formal structure. There is a particular focus on aesthetic problems about appearance and reality, literacy and visual effects, communication and alienation through film technology.

- **DC 233 Cinema & Art**
  This course will provide an overview of avant-garde film, video, animation and installation, and the relationship of these cinematic forms to Modern and Contemporary art.

- **DC 235 Adaptation: The Cinematic Recrafting of Meaning**
  This course explores contemporary cinematic adaptations of literature and how recent reworkings in film open viewers up to critical analysis of the cultural practices surrounding the promotion and reception of these narratives.

- **DC 250 Working with Actors I**
  This course is an introduction and examination of the collaborative process between the actor and director. Methods of study include lecture, discussion, assignments, and in-class acting exercises.

- **DC 274 Image, Optics and Cinematic Motion**
  Cinematography is the scientifically-grounded discipline of making lighting and camera choices in order to record moving images. This course deals with the basic mathematics, physics, and photochemistry that underlie cinematography and that motivate camera design and construction. A student who masters the foundations of cinematography through a mixture of lectures, readings, exercises, and labs will be able to evaluate and understand how motion-based recording choices affect perception of moving images they see every day.

- **GAM 206 History of Games**
  This class will examine particular games and game genres in their historical context using a case study format.

- **GAM 224 Introduction to Game Design**
  Students will learn about a game's "hook", its "high concept" and the crucial needs of marketing for a successful game design. Students will also learn to design a game's component pieces.

- **Graphic Design**
  - **GD 200 Graphic Design I**
    This course introduces the world of graphic design in a social and historical context. The goals are to explore formal structures and research methods with emphasis on the role of analysis and conceptual thinking as the first tasks of the print and multi-media designer. The course includes basic instruction in typography, color, problem-solving in print and on screen.
  - **GD 220 History of Design I**
The history of graphic design is an evolution in aesthetics, technology, style and visual communication. The class will encompass a survey of the major movements in the field of print design, notable designers and design materials. The nature of changing methods, materials, technologies and values are examined in the context of the social and political realities that shape communication. The course will include the historical shift from print to multimedia design methodologies.

- **GD 380 Design for Client and Community**
  This course enables students to work from start to finish on client-based graphic design and projects. Students establish working relationships as individuals and in teams that utilize their skills to effectively evaluate the communication needs of an organization or business, develop design solutions that fulfill those needs, and negotiate the process between designers and clients.

- **Visualization**
  - **IM 222 Information Visualization**
    This course discusses the basic problems and techniques of visualizing quantitative and qualitative data.

**Restrictions for CDM Students**

A CDM student can take any CDM course approved for liberal studies credit and use it to satisfy a domain of the liberal studies program (LSP) provided the course is NOT required as part of the student's major.

A CDM student can not count a course as a liberal studies requirement and a major requirement. No double counting is allowed for CDM classes by CDM students.

**Example 1**

- A CGMT student cannot use GPH 211 to satisfy the arts and literature requirement of LSP, as GPH 211 is required by all CGMT tracks.
- An ECT major CAN take GPH 211 to satisfy the arts and literature requirement of the LSP. The course qualifies for a liberal studies program domain that is required by the student's major.

**Example 2**

- A CS student CAN take GPH 259 to satisfy the Scientific Inquiry (SI)-Quantitative-Lab requirement of LSP because the course is not required by the CS major AND it counts for SI-Lab which is a required domain for CS students.
- A CS student CANNOT take CSC 250 to satisfy SI because, although the course is not required by any or our programs, it qualifies for SI-quantitative (not Lab) which is NOT a required domain for CDM students.

**Example 3**

- A CS student takes GPH 211 for arts and literature LSP. Although GPH 211 is allowed as an elective even if it is not a 300 level course, the student CANNOT count the course both as satisfying an LSP domain AND as an elective for the CS program.

**Combined Bachelor/Master Degrees**

Academically gifted students may choose to enroll in the combined degree program. This dual degree program allows students to combine any CDM bachelor's degree with any CDM master's degree, except the joint MA/JD and joint MS/JD degree programs, following the structure outlined below.

**Program Structure**

Students in the combined degree program take a maximum of three graduate level courses that count toward both their bachelor's and master's degree requirements. Students may enroll in graduate level coursework in the junior and senior year only. Students in the combined degree program will receive the bachelor's degree
after meeting all graduation requirements including the standard 192 undergraduate credit hours. The
master's degree is awarded after the student completes 10 additional graduate courses (40 credit hours),
instead of the standard 13 courses (52 credit hours).

Admission Criteria

- Minimum of 6 courses (24 credit hours) completed at DePaul
- GPA of 3.3 or higher in courses taken at DePaul
- Endorsement of faculty advisor

In order to apply for the BS/MS combined degree program, your faculty advisor must send an e-mail
recommendation to Becky Krochmal. The recommendation should include your full name, student ID number,
and the BS and MS degrees you wish to apply for.

Bachelor of Arts in Computing students who are enrolled via the School for New Learning are eligible for this
program. Interested students who meet the admission criteria for a combined degree should contact Kenn
Skorupa at SNL or Becky Krochmal at CDM for more information.

Maintaining Good Standing

- Each student's cumulative GPA and course grades will be reviewed after each Autumn, Winter, and
  Spring Quarter
- The student and Faculty Advisor will be notified when the student's cumulative GPA falls below 3.3 or
  when the student receives less than a C- in graduate level course.
- If a student's cumulative GPA falls below 3.3, the student must earn a term GPA of 3.3 or above in the
  following quarter to stay active. If the student does not achieve a 3.3 term GPA, then the student will be
  dismissed from the combined program and resume the traditional BA/BS. As long as the student's
  cumulative GPA is below 3.3, the student must continue to achieve at least a 3.3 term GPA in all
  following quarters or face dismissal. If, at any point, the student's cumulative GPA is once again 3.3 or
  higher, term requirements no longer apply.
- If a student does not maintain good standing, they will be dismissed from the Combined Degree and
  returned to normal undergraduate degree seeking status. Any graduate courses passed before dismissal
  will not be counted toward graduate credit and may not be retaken (if the student does pursue graduate
  study, other graduate courses must be substituted). If dismissed students wish to apply to a CDM
  graduate degree program, they may do so following normal CDM Admission procedures, but will still be
  required to take 13 graduate courses for a MS degree.

Bachelor's Degree to Master's Degree Transition

After completing the undergraduate degree, when the student is ready to begin the graduate degree, the
student should email Becky Krochmal who will process the change of status.

If, upon completion of the bachelor's degree, the student did not meet all prerequisites for the master's
degree, then the student will need to complete (course, test or waiver) the missing prerequisites for the
chosen master's Degree. If, while still in the undergraduate degree phase, the student receives less than a C-
in graduate level course, the course cannot count towards the MS/MA Degree.

Designing a Course of Study

It is extremely important that the student and faculty advisor work together on a course of study immediately
upon admission to the Combined Degree Program.

This course of study may include which undergraduate classes to avoid taking in order to take the graduate
version. Failure to put together a solid plan can lead to extra coursework and a lengthening of the Combined
Degree program.

It is advisable for the student and advisor to enter the proposed plan of study in the student communication
record on the CDM intranet so it is available to the student and CDM faculty and staff.

Registering for Master's Degree Courses

Starting in Fall 2010, students will be enrolled in the graduate class instead of the special "Combined Degree
Course". The student's advisor must email Associate Dean Lucia Dettori requesting the enrollment. The
following information should be included in the email: student's full name, DePaul ID, graduate course and
section, and the undergraduate course to be substituted for. Student services will process the enrollment.
Minors

A minor is a combination of courses that provides a cohesive introduction to an area of study. Typically, courses taken to satisfy minor field requirements are credited as open electives; however, there are some instances where minor field courses may be used for credit in other areas of the student's curriculum. Grades for all courses, taken to fulfill a minor field requirement must be ‘C’ or above. Grades of ‘C-’ may be accepted for credit in the minor provided the minor GPA is 2.0 or above. A minimum of one-half of the courses required for a minor must be completed at DePaul University.

MINORS IN THE COLLEGE OF COMMERCE

Students enrolled in the College of Computing and Digital Media (CDM) may obtain a minor in Accounting, Business Administration, E-Business, Economics, Management, MIS, Marketing, and Pre-MBA. Please see the College of Commerce Section for Minor Requirements.

MINORS IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Students enrolled in the College of Computing and Digital Media (CDM) may obtain a minor through the College of Liberal Arts and Sciences. Most Liberal Arts and Science departments offer minor concentrations of study. In general, a minor in a Liberal Arts and Sciences discipline consists of a set of introductory courses plus another set of more specialized courses. Most minors require six courses, some of which may also be used for credit in the Liberal Studies Program. For a complete list of minors offered through the College of Liberal Arts and Sciences, please consult that section of this online Bulletin.

MINORS IN THE COLLEGE OF COMPUTING AND DIGITAL MEDIA

Computer technology is an omnipresent part of our world, used in academic disciplines from physics to history to geography. CDM offers several minors that will appeal to all DePaul University students.

Political science and geography majors can pursue a minor in Data Analysis, Databases, or Data Visualization, which is important to understanding how to analyze census or GPS data.

Communications majors may be interested in Digital Cinema which will give you skills in creating videos for advertising.

Art majors interested in a career in graphics programming, animation or design may be interested in CDM's tech-focused minors in Animation or Computer Graphics Software Development.

An academic foundation in E-Commerce Technology, Networks or Information Systems can give Commerce students an edge in a tough job market.

There are other examples too numerous to mention. So if you have questions or want advice on what minor is best for you, can email our CDM Undergraduate Services team: gocdm@cdm.depaul.edu or call them at: 312-362-8714.

Policies for Academic Minors

Students must:

1. earn at least a grade of C- in each minor course and a GPA of no less than 2.0 for all courses in the minor;
2. earn at least a cumulative GPA of 2.0 for all courses applied to the minor;
3. not select the pass/fail option for courses in the minor
4. meet the following residency requirement: no more than 50% of the requirements of a minor may be fulfilled by transfer credits, AP credit, IB credit of CLEP credit.

Finally, students cannot earn a minor in their major program. Courses required to fulfill a minor are determined by the unit in which the minor resides.
**CDM Minors for CDM Students**

To obtain a minor in CDM when the major is also in CDM:

1. Satisfy all requirements for the major
2. Satisfy all requirements for the minor
3. Students must take at least 6 courses in the minor area that do not count towards their CDM major

**Note:** If you have already taken some of the courses listed under your minor on this page, work with your advisor to choose other courses within the same program area, i.e., NT minor would look under NT major courses and Computer Graphics Software Development would look under Computer Graphics Courses, in order to have 6 distinct courses.

- Animation Minor
- Computer Graphics Software Development
- Computer Science
- Data Analysis and Data Mining
- Database
- Data Visualization Development
- Digital Cinema
- E-Commerce Technology
- Game Design
- Game Programming
- Graphic Design
- Information and Computing in the Modern World
- Interactive Media
- Information Systems
- Information Technology
- Network Technologies
- Screenwriting
- Security
- Security in the Electronic World
- Software Engineering
- Sound Design
- Television Production Minor
- Visual Computing
- Visual Effects

**CDM Minor Requirements**

**Animation Minor**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>or ANI 201</td>
<td>Animation I</td>
</tr>
<tr>
<td>ANI 230</td>
<td>3D Design &amp; Modeling</td>
</tr>
<tr>
<td>ANI 231</td>
<td>3D Animation</td>
</tr>
<tr>
<td>ANI 206</td>
<td>History of Animation</td>
</tr>
</tbody>
</table>

3 courses from the following list: (at least 1 must be ANI)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 201</td>
<td>Introduction to Screenwriting</td>
</tr>
<tr>
<td>DC 210</td>
<td>Digital Cinema Production I</td>
</tr>
<tr>
<td>DC 220</td>
<td>Editing I</td>
</tr>
</tbody>
</table>

Any ANI course

**Computer Graphics Software Development Minor**

**Liberal Studies**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPH 211</td>
<td>Perceptual Principles for Digital Environments I</td>
</tr>
<tr>
<td>or GD 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>GPH 212</td>
<td>Perceptual Principles for Digital Environments II</td>
</tr>
</tbody>
</table>
Course Requirements

CSC 261 Programming Languages I: C/C++
CSC 262 Programming Languages II: C/C++
CSC 393 Data Structures in C++
GPH 329 Computer Graphics Development II
GPH 339 Advanced Rendering Techniques
GPH 372 Principles of Computer Animation

Computer Science Minor
CSC 241 Introduction to Computer Science I
and CSC 242 Introduction to Computer Science II
and CSC 224 Java for Programmers
or
CSC 211 Programming in Java I
and CSC 212 Programming in Java II
and CSC 309 Object-Oriented Programming in C++
or
CSC 261 Programming Languages I: C/C++
and CSC 262 Programming Languages II: C/C++
and CSC 224 Java for Programmers
CSC 393 Data Structures in C++
or
CSC 383 Data Structures and Algorithms in Java
MAT 140 Discrete Mathematics I
CSC 373 Computer Systems I
CSC 374 Computer Systems II

Data Analysis and Data Mining Minor
IT 240 Introduction to Desktop Databases
IT 223 Data Analysis
CSC 324 Data Analysis and Statistical Software II
CSC 367 Introduction to Data Mining
CSC 334 Advanced Data Analysis
2 CDM Electives

Database Minor
CSC 211 Programming in Java I
and CSC 212 Programming in Java II
IT 223 Data Analysis
IT 240 Introduction to Desktop Databases
CSC 352 Database Programming
CSC 367 Introduction to Data Mining
1 CDM Elective

Data Visualization Development Minor

Liberal Studies
GPH 211 Perceptual Principles for Digital Environments I
GPH 212 Perceptual Principles for Digital Environments II

Course Requirements
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 261</td>
<td>Programming Languages I: C/C++</td>
</tr>
<tr>
<td>CSC 262</td>
<td>Programming Languages II: C/C++</td>
</tr>
<tr>
<td>CSC 323</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>CSC 393</td>
<td>Data Structures in C++</td>
</tr>
<tr>
<td>GPH 329</td>
<td>Computer Graphics Development II</td>
</tr>
<tr>
<td>GPH 372</td>
<td>Principles of Computer Animation</td>
</tr>
<tr>
<td>GPH 380</td>
<td>Visualization</td>
</tr>
</tbody>
</table>

**Digital Cinema Minor**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 205</td>
<td>Foundations of Cinema</td>
</tr>
<tr>
<td>DC 225</td>
<td>Digital Still Photography</td>
</tr>
<tr>
<td>DC 201</td>
<td>Introduction to Screenwriting</td>
</tr>
<tr>
<td>DC 220</td>
<td>Editing I</td>
</tr>
</tbody>
</table>

3 courses from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>DC 210</td>
<td>Digital Cinema Production I</td>
</tr>
<tr>
<td>DC 270</td>
<td>Topics in Digital Cinema</td>
</tr>
<tr>
<td>DC 215</td>
<td>Digital Sound Design</td>
</tr>
<tr>
<td>DC 275</td>
<td>Cinematography</td>
</tr>
<tr>
<td>DC 310</td>
<td>Digital Cinema Production II</td>
</tr>
<tr>
<td>DC 320</td>
<td>Editing II</td>
</tr>
<tr>
<td>DC 389</td>
<td>The Big Picture: The Entertainment Industry</td>
</tr>
</tbody>
</table>

**E-Commerce Technology Minor**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>IT 230</td>
<td>Building Internet Applications</td>
</tr>
<tr>
<td>ECT 330</td>
<td>Advanced Internet Application Development</td>
</tr>
<tr>
<td>IM 210</td>
<td>Introduction to Human-Computer Interaction</td>
</tr>
</tbody>
</table>

1 course from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECT 355</td>
<td>Internet Systems: Collaboration, Commerce, and Media</td>
</tr>
<tr>
<td>ECT 360</td>
<td>Introduction to XML</td>
</tr>
<tr>
<td>ECT 365</td>
<td>Web Server Operations</td>
</tr>
</tbody>
</table>

**Game Design Minor**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 201</td>
<td>Introduction to Screenwriting</td>
</tr>
<tr>
<td>GD 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>or ANI 201</td>
<td>Animation I</td>
</tr>
<tr>
<td>ANI 230</td>
<td>3D Design &amp; Modeling</td>
</tr>
<tr>
<td>GAM 224</td>
<td>Introduction to Game Design</td>
</tr>
<tr>
<td>or GAM 226</td>
<td>Game Design for Majors</td>
</tr>
<tr>
<td>GAM 244</td>
<td>Game Development I</td>
</tr>
<tr>
<td>GAM 245</td>
<td>Game Development II</td>
</tr>
</tbody>
</table>

**Game Programming Minor**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GAM 224</td>
<td>Introduction to Game Design</td>
</tr>
<tr>
<td>or GAM 226</td>
<td>Game Design for Majors</td>
</tr>
<tr>
<td>GAM 244</td>
<td>Game Development I</td>
</tr>
</tbody>
</table>
GAM 245  Game Development II
GAM 374  Action Games Programming

2 courses from the following list:
ANI 230  3D Design & Modeling
GPH 321  Computer Graphics Development I
GPH 329  Computer Graphics Development II
GPH 350  Digital Modeling II
Any other 300-Level GAM or GPH course

Graphic Design Minor

GD 105  Intro to Visual Design
GD 200  Graphic Design I
GD 300  Graphic Design II
GD 230  Typography

3 courses from the following list and/or any GD course (at least 1 must be GD):
ANI 101  Animation for Non-Majors
ANI 201  Animation I
ANI 230  3d Design and Modeling
ANI 260  Motion Graphics
ANI 360  Advanced Motion Graphics
DC 125  Digital Still Photography for Non-Majors
DC 220  Editing I
DC 225  Digital Still Photography
DC 321  Production Design
DC 376  Visual Design
IM 220  Interactive Media I
IM 222  Information Visualization
IM 320  Interactive Media II
IM 270  User-Centered Web Design
IT 130  The Internet and the Web

2 of the following courses may substitute for 1 course:
GD 350  Portfolio Workshop
GD 150  Illustrator Workshop
GD 151  Photoshop Workshop
GD 152  Digital Typography Workshop

Information and Computing in the Modern World Minor

ECT 350  Internet, Commerce and Society
HCI 201  Multimedia and the World Wide Web
IT 201  Introduction to Information Systems
IT 215  Analysis and Design Techniques
CSC 223  The Impact of Computing Technology on Our Lives
or IT 228  Ethics in Computer Games and Cinema
or CSC 208  The Computer and Social Responsibility
or IS 208  Information Technology, Economy and Society
IS 356  Knowledge Management Systems
or IS 374  Management Support Systems
or IT 398  Topics in Global Information Technology

Interactive Media Minor

Required Courses
HCI 201  Multimedia and the World Wide Web
or IT 130  The Internet and the Web
IM 210  Introduction to Human-Computer Interaction
GD 105  Intro to Visual Design
or GPH 211  Perceptual Principles for Digital Environments
IM 220  Interactive Media I
IM 270  User-centered Web Design
2 courses from the following list:
IM 222  Information Visualization
IM 208  Virtual Worlds and Online Communities
IM 230  Scripting for Interactive Media
IM 320  Interactive Media II
IM 330  Advanced Scripting for Interactive Media
IT 231  Web Development I
IM 320  Interactive Media II

Information Systems Minor

IT 240  Introduction to Desktop Databases
IT 201  Introduction to Information Systems
IT 215  Analysis and Design Techniques
IS 372  Fundamentals of Software Project Management
IS 373  Introduction to Large Systems Implementation

Information Technology Minor

IT 130  The Internet and the Web
IT 231  Web Development I
IT 240  Introduction to Desktop Databases
IT 263  Applied Networks and Security
or TDC 261  Basic Communication Systems
IT 215  Analysis and Design Techniques
1 CDM Elective

Network Technology Minor

CSC 211  Programming in Java I
or CSC 261  Programming Languages I:C/C++
CSC 212  Programming in Java II
or CSC 262  Programming Language II:C/C++
IT 201  Introduction to Information Systems
IT 263  Applied Networks and Security
TDC 362  Principles of Data Communication
TDC 363  Introduction to Local Area Networks
TDC 365  Network Interconnection Technologies

Screenwriting Minor

DC 201  Introduction to Screenwriting
DC 222  Classic Hollywood Film Structure
DC 301  Advanced Screenwriting I
DC 302  Advanced Screenwriting II
DC 303  Advanced Screenwriting III
DC 304  Topics in Screenwriting
### Security Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>and CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 261</td>
<td>Programming Language I: C/C++</td>
</tr>
<tr>
<td>and CSC 262</td>
<td>Programming Language II:C/C++</td>
</tr>
<tr>
<td>CSC 233</td>
<td>Codes and Cyphers</td>
</tr>
<tr>
<td>or CSC 333</td>
<td>Cryptology</td>
</tr>
<tr>
<td>CNS 378</td>
<td>Host and Information Security</td>
</tr>
<tr>
<td>CNS 320</td>
<td>Computer Forensic and Incident Response</td>
</tr>
<tr>
<td>CNS 228</td>
<td>Legal, Ethical and Social Issues in Information Security</td>
</tr>
<tr>
<td>CNS 340</td>
<td>Fundamentals of Information Assurance</td>
</tr>
</tbody>
</table>

### Security in the Electronic World Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>and IT 231</td>
<td>Web Development I</td>
</tr>
<tr>
<td>and IT 232</td>
<td>Web Development II</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 261</td>
<td>Programming Language I: C/C++</td>
</tr>
<tr>
<td>and CSC 262</td>
<td>Programming Language II:C/C++</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 241</td>
<td>Introduction to Computer Science I</td>
</tr>
<tr>
<td>and CSC 242</td>
<td>Introduction to Computer Science II</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>and CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>CNS 228</td>
<td>Legal, Ethical and Social Issues in Information Security</td>
</tr>
<tr>
<td>CNS 233</td>
<td>Codes and Cyphers</td>
</tr>
<tr>
<td>CNS 320</td>
<td>Computer Forensic and Incident Response</td>
</tr>
<tr>
<td>CNS 340</td>
<td>Fundamentals of Information Assurance</td>
</tr>
</tbody>
</table>

### Software Engineering Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 261</td>
<td>Programming Languages I:C/C++</td>
</tr>
<tr>
<td>and CSC 262</td>
<td>Programming Languages II:C/C++</td>
</tr>
<tr>
<td>and CSC 224</td>
<td>Java for Programmers</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 241</td>
<td>Introduction to Computer Science I</td>
</tr>
<tr>
<td>and CSC 242</td>
<td>Introduction to Computer Science II</td>
</tr>
<tr>
<td>and CSC 224</td>
<td>Java for Programmers</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>CSC 211</td>
<td>Programming in Java I</td>
</tr>
<tr>
<td>CSC 212</td>
<td>Programming in Java II</td>
</tr>
<tr>
<td>and then</td>
<td></td>
</tr>
<tr>
<td>CSC 383</td>
<td>Data Structures and Algorithms in Java</td>
</tr>
<tr>
<td>SE 325</td>
<td>Principles and Practices of Software Engineering</td>
</tr>
<tr>
<td>SE 330</td>
<td>Object-Oriented Modeling</td>
</tr>
<tr>
<td>SE 350</td>
<td>Object-Oriented Software Development</td>
</tr>
</tbody>
</table>

### Sound Design Minor
Digital Sound Design
Music for Film and Video
Production Sound
Advanced Digital Sound Design
3 courses from the following list

Digital Sound for Computer Games
Advanced Sound Mixing for Cinema
Advanced Dialogue Recording and Editing
Advanced Sound Effects Recording and Editing
Sound for Multimedia
History of Motion Picture Sound

Television Production Minor

Digital Cinema Production I
Editing I
Introduction to Television Production
Writing for Television
The Business of Television
Editing for Television
Television Program Development
Topics in TV Production

Visual Computing Minor

Discrete Mathematics I
Linear Algebra with Applications
1 quarter of Calculus (Prerequisite for CSC 381)
Data Analysis (Prerequisite for CSC 367)
Introduction to Digital Image Processing
Applied Image Analysis
Research Experience
Introduction to Data Mining (IT 223 requirement)

Visual Effects Minor

3D Design & Modeling
Advanced 3D Compositing
Editing I
Color Correction
Introduction to Visual Effects
Digital Compositing I
Digital Compositing II

Bachelor of Arts Degree Programs

Animation
The B.A. in Animation emphasizes solid traditional animation and storytelling skills, while encouraging experimentation in form, content and medium. Students are free to work in hand-drawn, stop-motion, cut-out and 3D computer animation. They may produce hybrid forms fully integrated with live action video, draw web-based shorts inspired by Hollywood or anime, or design motion graphics for film titles and commercials.

Students will gain a broad foundation in the rich history of the art form, drawing and design skills, and prepare for the future under the guidance of faculty with professional experience in television, film, art and interactive media. Students will have access to the latest in animation technology, computing systems, and software. Students will gain valuable production experience both in class and through internships, and benefit from CDM's relationship with Chicago's many animation and production studios.

Online Learning Options

Some courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.A. degree in Animation:

<table>
<thead>
<tr>
<th>First Year Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
</tr>
<tr>
<td>Focal Point</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
</tr>
<tr>
<td>(Note: See information below.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
</tr>
</tbody>
</table>

Learning Domains

<table>
<thead>
<tr>
<th>Arts and Literature (AL)</th>
<th>3 Courses Required:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- ART 106</td>
<td></td>
</tr>
<tr>
<td>- DC 233 or ART 200</td>
<td></td>
</tr>
<tr>
<td>- 1 Additional Course</td>
<td></td>
</tr>
</tbody>
</table>

| Philosophical Inquiry (PI) | 2 Courses Required (See note below) |

| Religious Dimensions (RD) | 2 Courses Required (See note below) |

Scientific Inquiry (SI) 1 SI Lab Course Required

| Self, Society and the Modern World (SSMW) | 3 Courses Required |

| Understanding the Past (UP) | 2 Courses Required |

Notes:

1 of the PI or RD courses must be an ethics course: Recommended choices are DC/GAM/IT 228 (PI), PHL/MGT 248 (PI) or REL/MGT 228 (RD) * Students must earn a C- or better in this course.

Quantitative Reasoning and Technological Literacy:
Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam. Students who complete both LSP 120 and LSP 121 take one less Learning Domain course. Students may not apply the course reduction to any Domain where only one course is required, and if taken within the SI Domain, the reduction cannot be applied to the SI Lab requirement.

**Note:** Courses offered in the student’s primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees. The representation of these course requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>ANI 201 *</td>
<td>Animation I</td>
</tr>
<tr>
<td>ANI 206</td>
<td>History of Animation</td>
</tr>
<tr>
<td>DC 201</td>
<td>Introduction to Screenwriting</td>
</tr>
<tr>
<td>DC 220</td>
<td>Editing I</td>
</tr>
<tr>
<td>ART 218</td>
<td>Figure Drawing</td>
</tr>
</tbody>
</table>

* ANI 101 allowed for transfer students

6 Liberal Studies

**Second Year**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 220</td>
<td>Storyboarding and Narrative Development</td>
</tr>
<tr>
<td>ANI 230</td>
<td>3D Design and Modeling</td>
</tr>
<tr>
<td>ANI 231</td>
<td>3D Animation</td>
</tr>
<tr>
<td>ANI 320</td>
<td>Hand-Drawn Animation</td>
</tr>
<tr>
<td>DC 210</td>
<td>Digital Cinema Production I</td>
</tr>
<tr>
<td>ANI 318</td>
<td>Advanced Figure Drawing</td>
</tr>
</tbody>
</table>

6 Liberal Studies

**Third Year**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 240</td>
<td>Animation Production I</td>
</tr>
<tr>
<td>ANI 340</td>
<td>Animation Production II</td>
</tr>
<tr>
<td>ANI 222</td>
<td>Illustration Foundations</td>
</tr>
<tr>
<td>DC 215</td>
<td>Digital Sound Design</td>
</tr>
<tr>
<td>MCS 207</td>
<td>History of Cinema I, 1890-1945</td>
</tr>
<tr>
<td>or MCS 208</td>
<td>History of Cinema II, 1945-1975</td>
</tr>
<tr>
<td>or MCS 209</td>
<td>History of Cinema III, 1975-Present</td>
</tr>
</tbody>
</table>

3 Liberal Studies

2 Major Electives

2 Open Electives

**Fourth Year**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 260</td>
<td>Motion Graphics</td>
</tr>
<tr>
<td>ANI 394</td>
<td>Animation Project I</td>
</tr>
<tr>
<td>ANI 395</td>
<td>Animation Project II Capstone</td>
</tr>
</tbody>
</table>

5 Liberal Studies

2 Major Electives

2 Open Electives

**Major Electives**
Major electives can be chosen from the following list: Any ANI, ART, DC, GAM, GD, GPH, IM, TV or VFX course EXCEPT: ART 102, ART 104, ART 105, DC 120 or GPH 211.

Students must earn a grade of C- or higher in all major elective courses.

Open Electives
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements
Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Digital Cinema

The B.A. in Digital Cinema is an innovative motion picture production program dedicated to utilizing the latest cutting-edge digital technology while incorporating classic cinema narrative theory and aesthetics. Students receive hands-on experience with the latest production equipment in the first year and get an insider's view of the industry from experienced faculty. Students in this program will gain practical production experience through classes, internships and the Project Bluelight program working under a group of professionals in a full-length feature film, or working in an all-student independent short productions.

The Bachelor of Arts Program offers three programs of undergraduate study for students: 

- The Cinema Production Concentration features a hands-on program in live-action production. With its greater number of electives, students may also develop an interdisciplinary program of study in cinema history and theory.
- The Screenwriting Concentration features a program of study in advanced screenwriting in addition to core courses in cinema production, dramatic literature and cinema history/theory.
- The Television Production Concentration features a hands-on experience with cutting edge digital equipment in studio and field production for video and television. Students apply theoretical concepts while planning and designing programs, capturing, editing (linear and non-linear) and post-production.
- The Sound Concentration features hands-on experience with cutting edge equipment and technologies in production and post-production sound for cinema in addition to other core courses in cinema production and post-production.

The curriculum consists of the DePaul University Liberal Studies Program and Major Field Courses.

Online Learning Options

Some courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are
Strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

**Cinema Production Concentration**

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.A. degree in Digital Cinema (Cinema Production concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
<td>LSP 112</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp;</strong></td>
<td>LSP 120 &amp; LSP 121</td>
</tr>
<tr>
<td><strong>Technological Literacy</strong></td>
<td>(Note: See information below)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiential Learning</strong></td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capstone</strong></td>
<td>DC 398*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts and Literature (AL)</strong></td>
<td>3 Courses Required</td>
</tr>
<tr>
<td><strong>Philosophical Inquiry (PI)</strong></td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>(See note below)</td>
<td></td>
</tr>
<tr>
<td><strong>Religious Dimensions (RD)</strong></td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>(See note below)</td>
<td></td>
</tr>
<tr>
<td><strong>Scientific Inquiry (SI)</strong></td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td><strong>Self, Society and the Modern World</strong></td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>(SSMW)</td>
<td></td>
</tr>
<tr>
<td><strong>Understanding the Past (UP)</strong></td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

**Notes:** 1 of the PI or RD courses must be an ethics course: Recommended choices are DC/GAM/IT 228 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD).

* Students must earn a C- or better in this course.

**Quantitative Reasoning and Technological Literacy:** Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam. Students who complete both LSP 120 and LSP 121 take one less Learning Domain course. Students may not apply the course reduction to any Domain where only one course is required, and if taken within the SI Domain, the reduction cannot be applied to the SI Lab requirement.

**Note:** Courses offered in the student’s primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.
The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year
DC 101 Screenwriting for Majors
DC 110 Foundations of Cinema for Majors
DC 220 Editing I
DC 222 Classic Hollywood Film Structure
DC 206 History of Cinema Production
5 Liberal Studies
1 Major Elective
1 Open Elective

Second Year
ANI 101 Animation for Non-Majors
or ANI 201 Animation I
DC 210 Digital Cinema Production I
DC 270 Topics in Digital Cinema
or DC 370 Advanced Topics in Cinema
DC 215 Digital Sound Design
DC 225 Digital Still Photography
DC 275 Cinematography
DC 376 Visual Design
6 Liberal Studies

Third Year
DC 323 Pre-production for Cinema
VFX 200 Introduction to Visual Effects
DC 315 Advanced Digital Sound Design
DC 320 Editing II
DC 371 Documentary Production
5 Liberal Studies
1 Major Elective
1 Open Elective

Fourth Year
DC 310 Digital Cinema Production II
DC 389 The Big Picture: The Entertainment Industry
DC 398 Digital Cinema Capstone
4 Liberal Studies
1 Major Elective
3 Open Electives

Major Electives
Major Electives can be chosen for any 200 level DC, ANI, GD, VFX or TV courses. Students must earn a grade of C- or higher in all major elective courses.

Open Electives
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements
Students in this degree must meet the following requirements:
complete a minimum of 192 credit hours (generally 48 courses)  
earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)  
maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude  
- between 3.700 and 3.849 will be graduated magna cum laude  
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Screenwriting Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.A. degree in Digital Cinema (Screenwriting concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>LSP 120 &amp; LSP 121</td>
</tr>
<tr>
<td></td>
<td>(Note: See information below)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>DC 398*</td>
</tr>
</tbody>
</table>

Learning Domains

<table>
<thead>
<tr>
<th>Arts and Literature (AL)</th>
<th>3 Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

Notes: 1 of the Pi or RD courses must be an ethics course: Recommended choices are DC/GAM/IT 228 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)

* Students must earn a C- or better in this course.

Quantitative Reasoning and Technological Literacy: Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam. Students who complete both LSP 120 and LSP 121 take one less Learning Domain course. Students may not apply the course reduction to any Domain where only one course is required, and if taken within the SI Domain, the reduction cannot be applied to the SI Lab requirement.
**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees. The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

### First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 101</td>
<td>Screenwriting for Majors</td>
</tr>
<tr>
<td>DC 110</td>
<td>Foundations of Cinema for Majors</td>
</tr>
<tr>
<td>DC 222</td>
<td>Classic Hollywood Film Structure</td>
</tr>
<tr>
<td>DC 206</td>
<td>History of Cinema Production</td>
</tr>
<tr>
<td>DC 227</td>
<td>Film Philosophy</td>
</tr>
</tbody>
</table>

5 Liberal Studies  
2 Open Elective

### Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 210</td>
<td>Digital Cinema Production I</td>
</tr>
<tr>
<td>DC 220</td>
<td>Editing I</td>
</tr>
<tr>
<td>DC 349</td>
<td>Acting for Filmmakers</td>
</tr>
<tr>
<td>DC 270</td>
<td>Topics in Digital Cinema</td>
</tr>
<tr>
<td>DC 309</td>
<td>Feature Development</td>
</tr>
</tbody>
</table>

6 Liberal Studies  
1 Major Electives

### Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 301</td>
<td>Advanced Screenwriting I</td>
</tr>
<tr>
<td>DC 302</td>
<td>Advanced Screenwriting II</td>
</tr>
<tr>
<td>DC 303</td>
<td>Advanced Screenwriting III</td>
</tr>
<tr>
<td>DC 306</td>
<td>Writing the Sitcom</td>
</tr>
<tr>
<td>or DC 307</td>
<td>Writing the Episodic Drama</td>
</tr>
<tr>
<td>DC 235</td>
<td>Adaptation: The Cinematic Recrafting of Meaning</td>
</tr>
</tbody>
</table>

5 Liberal Studies  
1 Major Elective  
1 Open Elective

### Fourth Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 308</td>
<td>Writing On Assignment</td>
</tr>
<tr>
<td>DC 304</td>
<td>Topics in Screenwriting</td>
</tr>
<tr>
<td>DC 370</td>
<td>Advanced Topics in Cinema</td>
</tr>
<tr>
<td>DC 389</td>
<td>The Big Picture: The Entertainment Industry</td>
</tr>
<tr>
<td>DC 398</td>
<td>Digital Cinema Capstone</td>
</tr>
</tbody>
</table>

4 Liberal Studies  
2 Major Elective  
1 Open Electives

### Major Electives

Major Electives can be chosen for any **200 level DC, ANI, GD, VFX or TV courses**

Students must earn a grade of C- or higher in all major elective courses.
Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Television Production Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.A. degree in Digital Cinema (Television Production concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>LSP 120 &amp; LSP 121</td>
</tr>
<tr>
<td>(Note: See information below)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>DC 398*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required (See note below)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required (See note below)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

Notes: 1 of the PI or RD courses must be an ethics course: Recommended choices are DC/GAM/IT 228 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)
**Quantitative Reasoning and Technological Literacy:**
Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam. Students who complete both LSP 120 and LSP 121 take one less Learning Domain course. Students may not apply the course reduction to any Domain where only one course is required, and if taken within the SI Domain, the reduction cannot be applied to the SI Lab requirement.

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**
- DC 110 Foundations of Cinema for Majors
- DC 101 Screenwriting for Majors
- DC 220 Editing I
- DC 215 Digital Sound Design
- DC 225 Digital Still Photography
- 6 Liberal Studies
- 1 Open Elective

**Second Year**
- ANI 260 Motion Graphics
- DC 275 Cinematography
- DC 271 Introduction to Television Production
- DC 272 Writing for Television
- DC 376 Visual Design
- VFX 200 Introduction to Visual Effects
- 5 Liberal Studies
- 1 Major Elective

**Third Year**
- TV 289 The Business of Television
- TV 320 Editing for Television
- TV 301 Television Program Development
- DC 323 Pre-production in Cinema
- DC 371 Documentary Production
- 4 Liberal Studies
- 3 Open Electives

**Fourth Year**
- DC 372 Topics in TV Production
- DC 373 Advanced Documentary Production
- DC 378 Digital Compositing II
- DC 398 Digital Cinema Capstone
- 5 Liberal Studies
- 3 Open Electives
Major Electives

Major Electives can be chosen for any 200 level DC, ANI, GD, VFX or TV courses.

Students must earn a grade of C- or higher in all major elective courses.

Open Electives

Open Electives may be taken from any unit at DePaul. It is suggested that students include the following courses in their electives:

- JOUR 276 Photojournalism
- JOUR 365 Television News
- JOUR 385 Television News II

These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Sound Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.A. degree in Digital Cinema (Sound concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
</tr>
<tr>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
</tr>
<tr>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
</tr>
<tr>
<td>LSP 120 &amp; LSP 121</td>
</tr>
<tr>
<td>(Note: See information below)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
</tr>
<tr>
<td>LSP 200</td>
</tr>
<tr>
<td>Junior Year</td>
</tr>
<tr>
<td>Experiential Learning</td>
</tr>
<tr>
<td>Required</td>
</tr>
<tr>
<td>Senior Year</td>
</tr>
<tr>
<td>Capstone</td>
</tr>
<tr>
<td>DC 398*</td>
</tr>
</tbody>
</table>

Learning Domains

| Arts and Literature (AL)                |
| 3 Courses Required                      |
| Philosophical Inquiry (PI)             |
| 2 Courses Required                      |
Quantitative Reasoning and Technological Literacy:
Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam. Students who complete both LSP 120 and LSP 121 take one less Learning Domain course. Students may not apply the course reduction to any Domain where only one course is required, and if taken within the SI Domain, the reduction cannot be applied to the SI Lab requirement.

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year
DC 101 Screenwriting for Majors
DC 110 Foundations of Cinema for Majors
DC 210 Digital Cinema Production I
DC 215 Digital Sound Design
DC 220 Editing I
6 Liberal Studies
1 Open Elective

Second Year
DC 222 Classic Hollywood Film Structure
DC 225 Digital Still Photography
ANI 101 Animation for Non-Majors
or ANI 201 Animation I
DC 310 Digital Cinema Production II
DC 312 Music for Film and Video
DC 313 Production Sound
5 Liberal Studies
1 Major Elective

Third Year
DC 275 Cinematography
DC 315 Advanced Digital Sound Design
DC 317 Advanced Sound Mixing for Cinema
Fourth Year
DC 319  Advanced Sound Effects Recording and Editing
DC 371  Documentary Production
DC 389  The Big Picture: the Entertainment Industry
DC 398  Digital Cinema Capstone
DC 206  History of Cinema Production
5 Liberal Studies
2 Open Electives

Major Electives

Major Electives can be chosen for any 200 level DC, ANI, GD, VFX or TV courses. Students must earn a grade of C- or higher in all major elective courses.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Bachelor of Science Degree Programs

College of Computing and Digital Media :: Undergraduate Studies :: School of Cinema and Interactive Media (CIM) :: Bachelor of Science Degree Programs

Animation

The B.S. in Animation provides students with a solid foundation in the art of animation and its history combined with insight into the latest techniques used in the rapidly-moving fields of high end 3D animation in the film, television, and game development industries. Students will learn a comprehensive set of skills in 3D including character animation, 3D design and modeling, texturing, lighting, and rigging. 3D courses are designed to provide students with necessary proficiencies while also encouraging creativity and experimentation. Students will have access to the latest in animation software, computing systems, and
technologies including motion capture and green screen studios. Students will gain valuable production experience both in class and through internships, and benefit from CDM's relationship with Chicago's largest game development and animation studios.

Concentrations

Cinema Concentration
The technically demanding art of modern 3D character animation is grounded in the core fundamentals of animation mechanics, visual storytelling and acting. Right from the start, students in the Cinema concentration gain hands-on experience bringing digital characters to life. They are given in-depth instruction in the most up-to-date software and technology available, including motion capture and green screen, but the emphasis is always on creativity, experimentation and expression.

Game Art Concentration
Becoming a game development artist requires a solid foundation in animation, visual design principles, color theory, and drawing. Students in the Game Art concentration also receive in-depth instruction in the latest advanced game modeling and animation technology and practices, including motion capture, rigging and digital sculpting. They learn about real-world problem-solving, team dynamics, and pipeline requirements while working alongside programmers and game designers on cross-disciplinary game development projects.

Online Learning Options

Many courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

Cinema Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Animation (Cinema Concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
<td>LSP 112</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp;</strong></td>
<td>LSP 120 &amp; LSP 121</td>
</tr>
<tr>
<td><strong>Technological Literacy</strong></td>
<td>( Note: See information below )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiential Learning</strong></td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capstone</strong></td>
<td>ANI 395* or GAM 395*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts and Literature (AL)</strong></td>
<td>3 Courses Required:</td>
</tr>
<tr>
<td></td>
<td>- ART 106</td>
</tr>
<tr>
<td></td>
<td>- DC 233 or ART 200</td>
</tr>
<tr>
<td></td>
<td>- 1 Additional Course</td>
</tr>
<tr>
<td></td>
<td>( Note: GAM 224 recommended)</td>
</tr>
<tr>
<td><strong>Philosophical Inquiry (PI)</strong></td>
<td>2 Courses Required</td>
</tr>
<tr>
<td></td>
<td>(See note below)</td>
</tr>
<tr>
<td><strong>Religious Dimensions (RD)</strong></td>
<td>2 Courses Required</td>
</tr>
<tr>
<td></td>
<td>(See note below)</td>
</tr>
<tr>
<td><strong>Scientific Inquiry (SI)</strong></td>
<td>1 SI Lab Course Required</td>
</tr>
</tbody>
</table>

Cinema Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Animation (Cinema Concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
<td>LSP 112</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp;</strong></td>
<td>LSP 120 &amp; LSP 121</td>
</tr>
<tr>
<td><strong>Technological Literacy</strong></td>
<td>( Note: See information below )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiential Learning</strong></td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capstone</strong></td>
<td>ANI 395* or GAM 395*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts and Literature (AL)</strong></td>
<td>3 Courses Required:</td>
</tr>
<tr>
<td></td>
<td>- ART 106</td>
</tr>
<tr>
<td></td>
<td>- DC 233 or ART 200</td>
</tr>
<tr>
<td></td>
<td>- 1 Additional Course</td>
</tr>
<tr>
<td></td>
<td>( Note: GAM 224 recommended)</td>
</tr>
<tr>
<td><strong>Philosophical Inquiry (PI)</strong></td>
<td>2 Courses Required</td>
</tr>
<tr>
<td></td>
<td>(See note below)</td>
</tr>
<tr>
<td><strong>Religious Dimensions (RD)</strong></td>
<td>2 Courses Required</td>
</tr>
<tr>
<td></td>
<td>(See note below)</td>
</tr>
<tr>
<td><strong>Scientific Inquiry (SI)</strong></td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Course</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Self, Society and the Modern World (SSMW)</strong></td>
<td>3 Courses Required</td>
</tr>
<tr>
<td><strong>Understanding the Past (UP)</strong></td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Notes:</td>
<td>1 of the PI or RD courses must be an ethics course: Recommended choices are DC/GAM/IT 228 (PI), PHL/MGT 248 (PI) or REL/MGT 228 (RD)</td>
</tr>
<tr>
<td>* Students must earn a C- or better in this course.</td>
<td></td>
</tr>
</tbody>
</table>

**Quantitative Reasoning and Technological Literacy:**
Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam. Students who complete both LSP 120 and LSP 121 take one less Learning Domain course. Students may not apply the course reduction to any Domain where only one course is required, and if taken within the SI Domain, the reduction cannot be applied to the SI Lab requirement.

*Note:* Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**

- GD 105 Intro to Visual Design
- ANI 201 Animation I *
- ANI 206 History of Animation
- ANI 230 3D Design and Modeling
- DC 101 Screenwriting for Majors
- ART 218 Figure Drawing

* ANI 101 Animation for Non-Majors allowed for transfers

6 Liberal Studies

**Second Year**

- ANI 222 Illustration Foundations
- ANI 220 Storyboarding and Narrative Development
- ANI 231 3D Animation
- ANI 300 3D Character Animation
- ART 318 Advanced Figure Drawing
  or ART 317 Advanced Figure Sculpture

6 Liberal Studies

1 Major Elective

**Third Year**

- DC 220 Editing I
- ANI 240 Animation Production I
- ANI 340 Animation Production II
- ANI 330 3D Character Modeling
- ANI 339 3D Texturing and Lighting
- DC 210 Digital Cinema Production I

3 Liberal Studies

2 Major Electives
Fourth Year

MCS 207 History of Cinema I, 1890-1945
or MCS 208 History of Cinema II, 1945-1975
or MCS 209 History of Cinema III, 1975-Present
GPH 355 3D Scripting for Animators
DC 215 Digital Sound Design
ANI 332 3D Rigging for Animators
ANI 394 Animation Project I
ANI 395 Animation Project II (Capstone)

Major Electives

Major electives can be chosen from any ANI, DC, GAM, GD, GPH, IM, TV, VFX, or ART courses except the following: ART 102, ART 104, ART 105, DC 120, or GPH 211.

Students must earn a grade of C- or higher in all major elective courses.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Game Art Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Animation (Game Art Concentration):

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110</td>
</tr>
<tr>
<td></td>
<td>or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103*</td>
</tr>
<tr>
<td></td>
<td>and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp;</td>
<td>LSP 120</td>
</tr>
<tr>
<td>Technological Literacy</td>
<td>&amp; LSP 121</td>
</tr>
<tr>
<td></td>
<td>(Note: See information below)</td>
</tr>
<tr>
<td>Sophomore Year</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

For Facebook, please visit our page at [Facebook link].
Junior Year

Experiential Learning Required

Senior Year

Capstone ANI 395* or GAM 395*

Learning Domains

<table>
<thead>
<tr>
<th>Arts and Literature (AL)</th>
<th>3 Courses Required:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- ART 106</td>
<td></td>
</tr>
<tr>
<td>- DC 233 or ART 200</td>
<td></td>
</tr>
<tr>
<td>- 1 Additional Course</td>
<td></td>
</tr>
<tr>
<td>(Note: GAM 224 recommended)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Philosophical Inquiry (PI)</th>
<th>2 Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>(See note below)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religious Dimensions (RD)</th>
<th>2 Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>(See note below)</td>
<td></td>
</tr>
</tbody>
</table>

Scientific Inquiry (SI) 1 SI Lab Course Required

Self, Society and the Modern World (SSMW) 3 Courses Required

Understanding the Past (UP) 2 Courses Required

Notes: 1 of the PI or RD courses must be an ethics course: Recommended choices are DC/GAM/IT 228 (PI), PHL/MGT 248 (PI) or REL/MGT 228 (RD)

* Students must earn a C- or better in this course.

Quantitative Reasoning and Technological Literacy:
Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam. Students who complete both LSP 120 and LSP 121 take one less Learning Domain course. Students may not apply the course reduction to any Domain where only one course is required, and if taken within the SI Domain, the reduction cannot be applied to the SI Lab requirement.

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the student's major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year
GD 105 Intro to Visual Design
ANI 201 Animation I *
ANI 206 History of Animation
ANI 220 Storyboarding and Narrative Development
ANI 230 3D Design and Modeling
ART 218 Figure Drawing
* ANI 101 Animation for Non-Majors allowed for transfers
6 Liberal Studies

Second Year
ANI 222 Illustration Foundations
ANI 231 3D Animation
ANI 300 3D Character Animation
ART 318  Advanced Figure Drawing  
or ART 317  Advanced Figure Sculpture  
GAM 244  Game Development I  
ANI 339  3D Texturing and Lighting  
6 Liberal Studies

**Third Year**
ANI 240  Animation Production I  
ANI 340  Animation Production II  
ANI 330  3D Character Modeling  
GAM 341  Introduction to Level Design  
ANI 344  Visual Design for Games  
GAM 245  Game Development II  
3 Liberal Studies  
2 Major Electives  
1 Open Elective

**Fourth Year**
GAM 392  Game Modification Workshop  
ANI 332  3D Rigging for Animators  
GPH 355  3D Scripting for Animators  
GAM 394  Game Development Project I  
and  
GAM 395  Game Development Project II (Capstone)  
or ANI 394  Animation Project I  
and  
ANI 395  Animation Project II (Capstone)  
5 Liberal Studies  
1 Major Elective  
1 Open Elective

**Major Electives**
Major electives can be chosen from any **ANI, DC, GAM, GD, GPH, IM, TV, VFX, or ART** courses except the following: ART 102, ART 104, ART 105, DC 120, or GPH 211.

Students must earn a grade of C- or higher in all major elective courses.

**Open Electives**
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details.) Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a **CDM minor or other minors** are normally credited as open electives.

**Degree Requirements**
Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul’s policy on repeat courses and a complete list of academic policies see the **DePaul Undergraduate Handbook**.
Computer Games Development (Joint with SoC)

The **B.S. in Computer Games Development** prepares students to work in the multi-disciplinary field of computer gaming and interactive media. This program also requires strong mathematical and programming skills. CDM’s Computer Games Development program combines coursework in game programming, game design, 3D Modeling, animation, physics, and artificial intelligence. Students work in cross-disciplinary teams to design and develop games. This program was created in consultation with our Game Dev Industry Advisory Board, and is the result of input from many of the top game programmers, producers and designers in the Chicago area.

**Concentrations**

Production and Design Concentration
Students in this concentration receive an education in all areas of game development, including game design, programming and animation, but also the basic business skills of project management, budgeting, contract negotiation, marketing and quality assurance.

Game Programming Concentration
Students in this concentration engage in the rigorous study of computer science basics, and then apply this knowledge to the demanding specialization of game programming. Areas of study include computer graphics development, computer science, linear algebra, game physics, and artificial intelligence programming.

**Online Learning Options**

Many courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

Production & Design Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Computer Games Development (Production and Design Concentration).

<table>
<thead>
<tr>
<th><strong>First Year Program</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
<td>LSP 112</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp; Technological Literacy</strong></td>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sophomore Year</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Junior Year</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiential Learning</strong></td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Senior Year</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capstone</strong></td>
<td>GAM 395*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Learning Domains</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts and Literature (AL)</strong></td>
<td>3 courses required:</td>
</tr>
<tr>
<td></td>
<td>- DC 201</td>
</tr>
<tr>
<td>Domain</td>
<td>Courses Required</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required: DC 228/IT 228</td>
</tr>
<tr>
<td></td>
<td>- 1 Additional Course</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Notes:</td>
<td>* Students must earn a C- or better in this course.</td>
</tr>
</tbody>
</table>

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**
- GAM 226 Game Design for Majors
- GD 105 Intro to Visual Design
- GAM 244 Game Development I
- GAM 245 Game Development II
- ANI 101 Animation for Non-Majors or ANI 201 Animation I
- 7 Liberal Studies

**Second Year**
- GAM 230 Intro to Game Production
- MAT 150 Calculus I
- CSC 261 Programming in C++ I
- CSC 262 Programming in C++ II
- GAM 341 Introduction to Level Design
- ANI 230 3D Design & Modeling
- 5 Liberal Studies
- 1 Major Elective

**Third Year**
- ANI 231 3D Animation
- GAM 250 Digital Sound for Computer Games
- GAM 374 Fundamentals of Game Programming I
- IM 220 Interactive Media I
- WRD 204 Technical Writing
- 4 Liberal Studies
- 3 Major Electives

**Fourth Year**
- GAM 333 The Business of Games
- GAM 392 Game Modification Workshop
- GAM 394 Game Development Project I
- GAM 395 Game Development Project II (Capstone)
- 3 Liberal Studies
- 1 Major Elective
Major Electives

Major electives can be chosen from the following list:
- 200 level ANI, DC, GAM, GD, GPH, or IM courses
- 300 level CDM courses

Students must earn a grade of C- or higher in all major elective courses.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. Click here for details. Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:
- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:
- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Game Programming Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. in Computer Games Development (Game Programming Concentration).

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>Not Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>GAM 395*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
</table>
| Arts and Literature (AL) | 3 courses required:  
- DC 201
- ANI 101
- 1 Additional Course |
| Philosophical Inquiry (PI)  | 2 courses required:  
- DC 228/IT 228
- 1 Additional Course |
<table>
<thead>
<tr>
<th>Religious Dimensions (RD)</th>
<th>2 Courses Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

**Notes:** * Students must earn a C- or better in this course.

**Note:** Courses offered in the student’s primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following **Course Requirements** on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**
- GAM 226 Game Design For Majors
- GD 105 Intro to Visual Design
- GAM 244 Game Development I
- CSC 261 Programming in C++ I
- CSC 262 Programming in C++ II
- MAT 150 Calculus I
- MAT 151 Calculus II
- 5 Liberal Studies

**Second Year**
- GAM 245 Game Development II
- CSC 393 Data Structures in C++
- ANI 230 3D Design & Modeling
- 7 Liberal Studies
- 2 Major Electives

**Third Year**
- CSC 373 Computer Systems I
- CSC 374 Computer Systems II
- GAM 350 Physics for Game Developers
- GAM 374 Fundamentals of Game Programming I
- GAM 377 Fundamentals of Game Programming II
- GPH 321 Computer Graphics Development I
- GPH 329 Computer Graphics Development II
- 4 Liberal Studies
- 1 Major Elective

**Fourth Year**
- GAM 376 Artificial Intelligence for Computer Games
- GPH 389 Real-Time Graphics Techniques
- GAM 392 Game Modification Workshop
- GAM 394 Game Development Project I
- GAM 395 Game Development Project II (Capstone)
- 3 Liberal Studies
- 1 Major Elective
- 3 Open Electives

**Major Electives**
Major electives can be chosen from the following list:
- 200 level ANI, DC, GAM, GPH, or IM courses
- 300 level CDM courses

Students must earn a grade of C- or higher in all major elective courses.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Computer Graphics and Motion Technology (Joint with SoC)

The B.S. in Computer Graphics and Motion Technology prepares students who have a passion for art, math or technology for a multitude of career paths in computer graphics animation. Graduates from this major create visuals for video games, scientific and aerospace visualization, movies, television, and advertising. Students in this program will learn:

- Design and analysis of mathematics/computer science programming principles for computer graphic design.
- History and theory of graphic design (color theory, perception).
- Usability and human-computer interaction.
- Hands-on, practical knowledge of digital photography, 3D animation, 3D modeling, texturing and rendering.
- Visual communication techniques.
- Real world experience working in a group as a contributing team member.
- Creating animation in a production pipeline environment.

Concentrations

Developer Concentration
This concentration prepares students for careers in graphics software development, with courses in programming languages (C/C++) and mathematics (calculus and algebra), in addition to animation and computer graphics.

Technical Designer Concentration
This concentration prepares students interested in visual aspects, including lighting setup, shader development, scripting and character rigging.

Online Learning Options
Some courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

Developer Concentration

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. degree in Computer Graphics and Motion Technology (Developer Concentration).

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp;</td>
<td>Not Required</td>
</tr>
<tr>
<td>Technological Literacy</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>GPH 395*</td>
</tr>
</tbody>
</table>

Learning Domains

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required (See note below)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required (See note below)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
</tbody>
</table>

Notes: 1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)

* Students must earn a C- or better in this course.

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year
CSC 261 Programming in C++ I
CSC 262 Programming in C++ II
CSC 393  Data Structures in C++
GPH 211  Perceptual Principles for Digital Environments I
or GD 105  Intro to Visual Design
GPH 212  Perceptual Principles for Digital Environments II
ANI 201  Animation I
MAT 140  Discrete Mathematics I
One of the following two-course sequences

**Calculus Sequence (option 1)**
MAT 150  Calculus I
MAT 151  Calculus II

**Calculus for Mathematics and Science Majors Sequence (option 2)**
MAT 160  Calculus for Mathematics and Science Majors I
MAT 161  Calculus for Mathematics and Science Majors II

**Calculus with Scientific Applications Sequence (option 3) Recommended**
MAT 170  Calculus I with Scientific Applications
MAT 171  Calculus II with Scientific Applications

3 Liberal Studies

**Second Year**
GPH 325  Survey of Computer Graphics
GPH 329  Computer Graphics Development II
GPH 339  Advanced Rendering Techniques
GPH 321  Computer Graphics Development I
or MAT 220  Linear Algebra with Applications
INTC 220  Public Speaking
7 Liberal Studies

**Third Year**
GPH 372  Principles of Computer Animation
CSC 321  Design and Analysis of Algorithms
IM 315  Theory and Perception of Color
WRD 204  Technical Writing
5 Liberal Studies
3 Major Electives

**Fourth Year**
GPH 375  Advanced Graphics Development
GPH 388  Production Pipeline Techniques
GPH 389  Real-Time Graphics Techniques
GPH 395  Computer Graphics Senior Project (Capstone)
4 Liberal Studies
1 Major Elective
3 Open Electives

**Major Electives**

Students must earn a grade of C- or higher in all major elective courses.

Students can take any of the following courses, as long as it was not previously used to satisfy a major requirement.

ANI 300  3D Character Animation
ANI 310  Motion Capture Workshop
ART 225  Beginning Photography
ART 329  Advanced Digital Photography
ART 360  Illustration
GPH 336  Smooth Surface Modeling for Graphics and Animation
GPH 340  Procedural Shading
GPH 341  Advanced Lighting Techniques
GPH 348  Rigging for Animation
GPH 376  Artificial Intelligence in Computer Games
GPH 380  Visualization
GPH 389  Real-Time Graphics Techniques
GPH 345  Digital Surface Modeling
GPH 259  Design Geometry
GPH 329  Computer Graphics Development II
GPH 350  Digital Modeling II
GPH 358  Computer Graphics Automation
GPH 360  Modeling Spaces
GPH 374  Computer Games
GPH 375  Advanced Graphics Development
HAA 263  History of Design
IM 210  Introduction to Human-Computer Interaction
IM 270  User-Centered Web Design
IM 322  Multimedia
IM 330  Advanced Scripting for Interactive Media
or IM 336  Interactive Media Scripting for Programmers *
IT 223  Data Analysis Self Placement Test
MAT 150  Calculus I
MAT 151  Calculus II
MAT 152  Calculus III

* Students who take CSC 261 and CSC 262 may take IM 330 or IM 336 as an elective. Only one of the two would count as an elective.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook

Technical Designer Concentration:

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. degree in Computer Graphics and Motion Technology (Technical Designer Concentration).
First Year Program

Chicago Quarter
LSP 110 or LSP 111

Focal Point
LSP 112

Writing
WRD 103* and WRD 104*

Quantitative Reasoning & Technological Literacy
Not Required

Sophomore Year

Multiculturalism in the US
LSP 200

Junior Year

Experiential Learning
Required

Senior Year

Capstone
GPH 395*

Learning Domains

Arts and Literature (AL)
3 Courses Required
- HAA 130
- ART 106
- 1 Additional Course

Philosophical Inquiry (PI)
2 Courses Required
(See note below)

Religious Dimensions (RD)
2 Courses Required
(See note below)

Scientific Inquiry (SI)
1 SI Lab Course Required

Self, Society and the Modern World (SSMW)
3 Courses Required

Understanding the Past (UP)
2 Courses Required

Notes:
1 of the PI or RD courses must be an ethics course: Recommended choices are CSC 208 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)
* Students must earn a C- or better in this course.

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the student's major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year

IM 230
Scripting for Interactive Media

and IM 330
Advanced Scripting for Interactive Media

or CSC 261
Programming in C++ I

and CSC 262
Programming in C++ II

GPH 211
Perceptual Principles for Digital Environments I

or GD 105
Intro to Visual Design

GPH 212
Perceptual Principles for Digital Environments II

ANI 201
Animation I

MAT 140
Discrete Mathematics I

5 Liberal Studies
<table>
<thead>
<tr>
<th>Second Year</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPH 345</td>
<td>Digital Surface Modeling</td>
<td></td>
</tr>
<tr>
<td>GPH 255</td>
<td>Hand Prototyping for Graphic Visualization</td>
<td></td>
</tr>
<tr>
<td>GPH 325</td>
<td>Survey of Computer Graphics</td>
<td></td>
</tr>
<tr>
<td>GPH 358</td>
<td>Computer Graphics Automation</td>
<td></td>
</tr>
<tr>
<td>IM 210</td>
<td>Introduction to Human-Computer Interaction</td>
<td></td>
</tr>
<tr>
<td>HAA 115</td>
<td>Principles of Asian Art</td>
<td></td>
</tr>
<tr>
<td>INTC 220</td>
<td>Public Speaking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 Liberal Studies</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM 315</td>
<td>Theory and Perception of Color</td>
<td></td>
</tr>
<tr>
<td>or ART 205</td>
<td>Color Theory and Application</td>
<td></td>
</tr>
<tr>
<td>GPH 259</td>
<td>Design Geometry</td>
<td></td>
</tr>
<tr>
<td>GPH 338</td>
<td>Survey of 3-D Animation</td>
<td></td>
</tr>
<tr>
<td>GPH 339</td>
<td>Advanced Rendering Techniques</td>
<td></td>
</tr>
<tr>
<td>HAA 242</td>
<td>Art From 1945 - 1975</td>
<td></td>
</tr>
<tr>
<td>WRD 204</td>
<td>Technical Writing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 Liberal Studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Major Elective</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Year</th>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPH 388</td>
<td>Production Pipeline Techniques</td>
<td></td>
</tr>
<tr>
<td>GPH 395</td>
<td>Computer Graphics Senior Project (Capstone)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Liberal Studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 Major Electives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Open Electives</td>
<td></td>
</tr>
</tbody>
</table>

**Major Electives**

Students must earn a grade of C- or higher in all major elective courses.

Students can take any of the following courses, as long as it was not previously used to satisfy a major requirement.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 300</td>
<td>3D Character Animation</td>
</tr>
<tr>
<td>ANI 310</td>
<td>Motion Capture Workshop</td>
</tr>
<tr>
<td>ART 225</td>
<td>Beginning Photography</td>
</tr>
<tr>
<td>ART 329</td>
<td>Advanced Digital Photography</td>
</tr>
<tr>
<td>ART 360</td>
<td>Illustration</td>
</tr>
<tr>
<td>GPH 259</td>
<td>Design Geometry</td>
</tr>
<tr>
<td>GPH 336</td>
<td>Smooth Surface Modeling for Graphics and Animation</td>
</tr>
<tr>
<td>GPH 340</td>
<td>Procedural Shading</td>
</tr>
<tr>
<td>GPH 341</td>
<td>Advanced Lighting Techniques</td>
</tr>
<tr>
<td>GPH 348</td>
<td>Rigging for Animation</td>
</tr>
<tr>
<td>GPH 376</td>
<td>Artificial Intelligence in Computer Games</td>
</tr>
<tr>
<td>GPH 380</td>
<td>Visualization</td>
</tr>
<tr>
<td>GPH 389</td>
<td>Real-Time Graphics Techniques</td>
</tr>
<tr>
<td>GPH 345</td>
<td>Digital Surface Modeling</td>
</tr>
<tr>
<td>GPH 329</td>
<td>Computer Graphics Development II</td>
</tr>
<tr>
<td>GPH 350</td>
<td>Digital Modeling II</td>
</tr>
<tr>
<td>GPH 358</td>
<td>Computer Graphics Automation</td>
</tr>
<tr>
<td>GPH 360</td>
<td>Modeling Spaces</td>
</tr>
<tr>
<td>GPH 374</td>
<td>Computer Games</td>
</tr>
<tr>
<td>GPH 375</td>
<td>Advanced Graphics Development</td>
</tr>
<tr>
<td>HAA 263</td>
<td>History of Design</td>
</tr>
</tbody>
</table>
IM 210  Introduction to Human-Computer Interaction
IM 270  User-Centered Web Design
IM 322  Multimedia
IM 330  Advanced Scripting for Interactive Media
or IM 336  Interactive Media Scripting for Programmers *
IT 223  Data Analysis Self Placement Test
MAT 150  Calculus I
MAT 151  Calculus II
MAT 152  Calculus III

* Students who take CSC 261 and CSC 262 may take IM 330 or IM 336 as an elective. Only one of the two would count as an elective.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Digital Cinema

The B.S. in Digital Cinema at DePaul CDM is an innovative program that seeks to define and to develop the evolving relationship between cinema production technologies and creative artistic expression. The intensive technical emphasis of the Bachelor of Science degree prepares students for work in live-action special effects, 3-D animation, and game development. Students receive hands-on experience with the latest production equipment in the first year and get an insider's view of the industry from experienced faculty. Students in this program will gain practical production experience through classes, internships and the Project Bluelight program working under a group of professionals in a full-length feature film, or working in an all-student independent short productions.

Online Learning Options

A few courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students
The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the B.S. degree in Digital Cinema:

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago Quarter</td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td>Focal Point</td>
<td>LSP 112</td>
</tr>
<tr>
<td>Writing</td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td>Quantitative Reasoning &amp; Technological Literacy</td>
<td>LSP 120 &amp; LSP 121</td>
</tr>
<tr>
<td>(Note: See information below)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiculturalism in the US</td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning</td>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone</td>
<td>DC 398*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Literature (AL)</td>
<td>3 Courses Required:</td>
</tr>
<tr>
<td></td>
<td>- ANI 206</td>
</tr>
<tr>
<td></td>
<td>- 2 Additional Courses</td>
</tr>
<tr>
<td>Philosophical Inquiry (PI)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td></td>
<td>(See note below)</td>
</tr>
<tr>
<td>Religious Dimensions (RD)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td></td>
<td>(See note below)</td>
</tr>
<tr>
<td>Scientific Inquiry (SI)</td>
<td>1 SI Lab Course Required</td>
</tr>
<tr>
<td>Self, Society and the Modern World (SSMW)</td>
<td>3 Courses Required</td>
</tr>
<tr>
<td>Understanding the Past (UP)</td>
<td>2 Courses Required</td>
</tr>
<tr>
<td>Notes:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 of the PI or RD courses must be an ethics course. Recommended choices are DC/GAM/IT 228 (PI), PHL 248/MGT 248 (PI) or REL228/MGT 228 (RD)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Students must earn a C- or better in this course.</td>
</tr>
</tbody>
</table>

Quantitative Reasoning and Technological Literacy:
Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam. Students who complete both LSP 120 and LSP 121 take one less Learning Domain course. Students may not apply the course reduction to any Domain where only one course is required, and if taken within the SI Domain, the reduction cannot be applied to the SI Lab requirement.

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of the following Course Requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year
DC 110 Foundation of Cinema for Majors
DC 101  Screenwriting for Majors
GD 105  Intro to Visual Design
DC 225  Digital Still Photography
DC 220  Editing I
6 Liberal Studies
1 Open Elective

Second Year
ANI 201  Animation I
ANI 230  3D Design and Modeling
VFX 200  Introduction to Visual Effects
DC 215  Digital Sound Design
DC 275  Cinematography
DC 210  Digital Cinema Production I
DC 222  Classic Hollywood Film Structure
5 Liberal Studies

Third Year
VFX 278  Digital Compositing I
ANI 231  3D Animation
ANI 260  Motion Graphics
DC 375  Advanced Cinematography
DC 315  Advanced Digital Sound Design
DC 310  Digital Cinema Production II
5 Liberal Studies
1 Open Elective

Fourth Year
VFX 378  Digital Compositing II
DC 320  Editing II
DC 325  Color Correction
DC 206  Introduction to Film History
DC 398  Digital Cinema Capstone
4 Liberal Studies
3 Open Elective

Major Electives
No major elective is required.

Open Electives
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements
Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude
Interactive Media (Joint with SoC)

The B.S. in Interactive Media degree prepares students for the expanding field of interaction design and its application to multimedia and web development. The base program integrates technical and artistic disciplines. Technical concepts and skills involve web markup languages, interactive scripting and human-centered design. The student also explores artistic areas of study such as communication design, animation, game design and cinema. A major in interactive media provides students with broad skills and expertise including:

- Develop well-designed web pages, sites, and interactive applications
- Design, code and create content for casual games
- Conduct usability tests for interactive web sites
- Employ visual design principles to express ideas and concepts
- Create prototypes for interactive displays

Online Learning Options

Many courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the BS degree in Interactive Media:

<table>
<thead>
<tr>
<th>First Year Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
</tr>
<tr>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
</tr>
<tr>
<td>LSP 112</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
</tr>
<tr>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp; Technological Literacy</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
</tr>
<tr>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiential Learning</strong></td>
</tr>
<tr>
<td>Required</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capstone</strong></td>
</tr>
<tr>
<td>Required*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts and Literature (AL)</strong></td>
</tr>
<tr>
<td>3 Courses Required:</td>
</tr>
<tr>
<td>- DC 205</td>
</tr>
<tr>
<td>- 2 Additional Courses</td>
</tr>
</tbody>
</table>
Philosophical Inquiry (PI) 2 Courses Required:
- CSC 208 or IT 228
- 1 Additional Course

Religious Dimensions (RD) 2 Courses Required

Scientific Inquiry (SI) 1 SI Lab Course Required

Self, Society and the Modern World (SSMW) 3 Courses Required:
- PSY 105
- 2 Additional Courses

Understanding the Past (UP) 2 Courses Required

Note: * Students must earn a C- or better in this course.

**Note:** Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

The representation of these course requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

**First Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors</td>
</tr>
<tr>
<td>or ANI 201</td>
<td>Animation I</td>
</tr>
<tr>
<td>GD 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>IT 240</td>
<td>Introduction to Desktop Databases</td>
</tr>
<tr>
<td>IM 270</td>
<td>User-Centered Web Design</td>
</tr>
<tr>
<td>GD 200</td>
<td>Art and Design I: History, Concept, Structure</td>
</tr>
</tbody>
</table>

6 Liberal Studies

**Second Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT 231</td>
<td>Web Development I</td>
</tr>
<tr>
<td>IM 210</td>
<td>Introduction to Human-Computer Interaction</td>
</tr>
<tr>
<td>IM 220</td>
<td>Interactive Media I</td>
</tr>
<tr>
<td>IM 230</td>
<td>Scripting for Interactive Media</td>
</tr>
<tr>
<td>IT 223</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>ANI 230</td>
<td>3D Design &amp; Modeling</td>
</tr>
<tr>
<td>GD 230</td>
<td>Typography I</td>
</tr>
</tbody>
</table>

5 Liberal Studies

**Third Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM 320</td>
<td>Interactive Media II</td>
</tr>
<tr>
<td>IM 330</td>
<td>Advanced Scripting for Interactive Media</td>
</tr>
<tr>
<td>IM 360</td>
<td>User-Centered Evaluation</td>
</tr>
<tr>
<td>GAM 244</td>
<td>Game Development I</td>
</tr>
<tr>
<td>WRD 204</td>
<td>Technical Writing</td>
</tr>
</tbody>
</table>

4 Liberal Studies

3 Major Electives
Fourth Year
IM 394Human-Computer Interaction Capstone
or CSC 394Software Projects (Capstone)
4 Liberal Studies
2 Major Elective
5 Open Electives

Major Electives

Major electives can be chosen from the following list
Any 200- or 300-level CDM, ART or CMN course.

Any of the following:
PSY 241 Research Methods I
PSY 242 Research Methods II
PSY 360 Theories of Learning and Cognition
PSY 375 Sensation and Perception
PSY 380 Industrial and Organizational Psychology
PSY 383 Psychology of Design

Students must earn a grade of C- or higher in all major elective courses.

Open Electives

Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements

Students in this degree must meet the following requirements:

- complete a minimum of 192 credit hours (generally 48 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.

Bachelor of Fine Arts Degree Programs

College of Computing and Digital Media - Undergraduate Studies, School of Cinema and Interactive Media (CIM), Bachelor of Fine Arts Degree Programs

Graphic Design

The BFA in Graphic Design at DePaul CDM provides a balance of conceptual, creative and technical design skills. Students will gain a strong foundation in both traditional and computer-based forms of graphic design with a professional orientation actively preparing students for the job market as well as their own creative practice. A unique feature of this degree is its practice in the allied fields of cinema, animation, game development and interaction design. Graduating students will be prepared for design careers in advertising,
book and web design, motion graphics, photography, poster design, signage, typography, multimedia, print, visual design, art direction and title design in cinema, television, games, and interactive media, among others.

**Online Learning Options**

Some courses are available for review and playback via the CDM Course Online playback system (COL). If a course is COL-enabled, any student registered in the course has access to the course playback. Students are strongly encouraged to utilize the COL resource wherever available. Some undergraduate courses are offered online. However, CDM currently does not offer any undergraduate program completely online. For more information on online learning at CDM visit the Online Learning page.

The Liberal Studies program is the general education portion of the curriculum at DePaul University. Students must earn a grade of D or better in all courses taken to satisfy these requirements. The only exceptions are WRD 103, WRD 104 and the capstone course (which is also considered a major field requirement) in which students need to earn a C- or better. Following are the specific requirements for the BFA in Graphic Design:

<table>
<thead>
<tr>
<th>First Year Program</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicago Quarter</strong></td>
<td>LSP 110 or LSP 111</td>
</tr>
<tr>
<td><strong>Focal Point</strong></td>
<td>Not Required</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>WRD 103* and WRD 104*</td>
</tr>
<tr>
<td><strong>Quantitative Reasoning &amp; Technological Literacy</strong></td>
<td>LSP 120</td>
</tr>
<tr>
<td></td>
<td>(Note: See information below)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiculturalism in the US</strong></td>
<td>LSP 200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiential Learning</strong></td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>(Note: GD 380 recommended)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capstone</strong></td>
<td>Two Course Sequence Required:</td>
</tr>
<tr>
<td></td>
<td>GD 394 - Capstone Project I*</td>
</tr>
<tr>
<td></td>
<td>GD 395 - Capstone Project II*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Domains</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts and Literature (AL)</strong></td>
<td>2 Courses Required from following list:</td>
</tr>
<tr>
<td></td>
<td>- Any HAA course approved for A&amp;L</td>
</tr>
<tr>
<td></td>
<td>- ANI 206 History of Animation</td>
</tr>
<tr>
<td></td>
<td>- DC 202 History of Film Editing</td>
</tr>
<tr>
<td></td>
<td>- DC 233 Cinema and Art</td>
</tr>
<tr>
<td></td>
<td>- MCS 207 History of Cinema I</td>
</tr>
<tr>
<td></td>
<td>- MCS 208 History of Cinema II</td>
</tr>
<tr>
<td></td>
<td>- MCS 209 History of Cinema III</td>
</tr>
</tbody>
</table>

| **Philosophical Inquiry (PI)** | 1 Course Required |
| | (See note below) |

| **Religious Dimensions (RD)** | 1 Course Required |
| | (See note below) |

| **Scientific Inquiry (SI)** | 1 SI Lab Course Required |

| **Self, Society and the Modern World (SSMW)** | 1 Course Required |

| **Understanding the Past (UP)** | 1 Course Required |

**Notes:**

* Students must earn a C- or better in this course.

Quantitative Reasoning and Technological Literacy:

Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may
Readiness for LSP 120 is determined by the math placement test taken online after admission. Students may need to take developmental coursework prior to LSP 120. The LSP 120 requirement may be waived by credit already earned for advanced math coursework or by passing a dedicated proficiency exam.

Note: Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the JYEL requirement.

In meeting learning domain requirements, no more than one course that is outside the students major and is cross-listed with a course within the students major, can be applied to count for LSP domain credit. This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees. The representation of these course requirements on a year-by-year basis is just a suggestion. Students are free to take these courses in any order they choose, provided they have mastered the course-specific prerequisites.

First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD 105</td>
<td>Intro to Visual Design</td>
</tr>
<tr>
<td>GD 150</td>
<td>Illustrator Workshop *</td>
</tr>
<tr>
<td>GD 151</td>
<td>Photoshop Workshop *</td>
</tr>
<tr>
<td>GD 200</td>
<td>Graphic Design I</td>
</tr>
<tr>
<td>GD 230</td>
<td>Typography</td>
</tr>
<tr>
<td>IT 130</td>
<td>The Internet and the Web</td>
</tr>
<tr>
<td>ANI 101</td>
<td>Animation for Non-Majors **</td>
</tr>
<tr>
<td>or ANI 201</td>
<td>Animation I</td>
</tr>
<tr>
<td>DC 225</td>
<td>Digital Still Photography</td>
</tr>
<tr>
<td>or ART 224</td>
<td>Beginning Digital Photography</td>
</tr>
<tr>
<td>ART 106</td>
<td>Beginning Drawing</td>
</tr>
</tbody>
</table>

* 2 quarter hours of credit

** ANI 101 Animation for Non-Majors allowed for transfer students

5 Liberal Studies

Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD 210</td>
<td>Digital Illustration I</td>
</tr>
<tr>
<td>GD 220</td>
<td>History of Design I</td>
</tr>
<tr>
<td>GD 221</td>
<td>History of Design II</td>
</tr>
<tr>
<td>DC 220</td>
<td>Editing I</td>
</tr>
<tr>
<td>IM 220</td>
<td>Interactive Media I</td>
</tr>
<tr>
<td>IM 270</td>
<td>User-Centered Web Design</td>
</tr>
</tbody>
</table>

4 Liberal Studies

3 Major Electives

Third Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD 270</td>
<td>Semiotics and Visual Design</td>
</tr>
<tr>
<td>GD 300</td>
<td>Graphic Design II</td>
</tr>
<tr>
<td>ANI 230</td>
<td>3D Design and Modeling</td>
</tr>
<tr>
<td>ANI 260</td>
<td>Motion Graphics</td>
</tr>
<tr>
<td>ANI 360</td>
<td>Advanced Motion Graphics</td>
</tr>
<tr>
<td>GD 152</td>
<td>Digital Typography Workshop *</td>
</tr>
<tr>
<td>GD 350</td>
<td>Portfolio Workshop *</td>
</tr>
<tr>
<td>IM 320</td>
<td>Interactive Media II</td>
</tr>
</tbody>
</table>

2 Liberal Studies

2 Major Electives

2 Open Electives

* 2 quarter hours of credit

Fourth Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD 330</td>
<td>Advanced Typography</td>
</tr>
<tr>
<td>GD 340</td>
<td>Publication Design</td>
</tr>
<tr>
<td>GD 360</td>
<td>Advertising Design</td>
</tr>
</tbody>
</table>
Major Electives
Students must complete 28 credits in any ANI, DC, GD, GAM, GPH, IM, TV, VFX, or ART course.

Students must earn a grade of C- or higher in all major elective courses.

Open Electives
Open Electives may be taken from any unit at DePaul. These are the only courses that may be taken under the pass/fail option. (Click here for details). Students must earn a grade of D or higher in all open elective courses. Courses that satisfy a CDM minor or other minors are normally credited as open electives.

Degree Requirements
Students in this degree must meet the following requirements:

- complete a minimum of 208 credit hours (generally 54 courses)
- earn a grade of C- or higher in all Major courses (excluding Liberal Studies courses and Open Electives)
- maintain a cumulative GPA of 2.0 or higher

Students who earn a cumulative DePaul University GPA:

- between 3.500 and 3.699 will be graduated cum laude
- between 3.700 and 3.849 will be graduated magna cum laude
- of at least 3.850 will be graduated summa cum laude

For DePaul's policy on repeat courses and a complete list of academic policies see the DePaul Undergraduate Handbook.
Special Programs

Minors

A minor is a combination of courses that provides a cohesive introduction to an area of study. Typically, courses taken to satisfy minor field requirements are credited as open electives; however, there are some instances where minor field courses may be used for credit in other areas of the student's curriculum. Grades for all courses, taken to fulfill a minor field requirement must be 'C' or above. Grades of 'C-' may be accepted for credit in the minor provided the minor GPA is 2.0 or above. A minimum of one-half of the courses required for a minor must be completed at DePaul University.

MINORS IN THE COLLEGE OF COMMERCE

Students enrolled in the College of Computing and Digital Media (CDM) may obtain a minor in Accounting, Business Administration, E-Business, Economics, Management, MIS, Marketing, and Pre-MBA. Please see the College of Commerce Section for Minor Requirements.

MINORS IN THE COLLEGE OF LIBERAL ARTS AND SCIENCES

Students enrolled in the College of Computing and Digital Media (CDM) may obtain a minor through the College of Liberal Arts and Sciences. Most Liberal Arts and Science departments offer minor concentrations of study. In general, a minor in a Liberal Arts and Sciences discipline consists of a set of introductory courses plus another set of more specialized courses. Most minors require six courses, some of which may also be used for credit in the Liberal Studies Program. For a complete list of minors offered through the College of Liberal Arts and Sciences, please consult that section of this online Bulletin.

MINORS IN THE COLLEGE OF COMPUTING AND DIGITAL MEDIA

Computer technology is an omnipresent part of our world, used in academic disciplines from physics to history to geography. CDM offers several minors that will appeal to all DePaul University students.

Political science and geography majors can pursue a minor in Data Analysis, Databases, or Data Visualization, which is important to understanding how to analyze census or GPS data.

Communications majors may be interested in Digital Cinema which will give you skills in creating videos for advertising.

Art majors interested in a career in graphics programming, animation or design may be interested in CDM's tech-focused minors in Animation or Computer Graphics Software Development.

An academic foundation in E-Commerce Technology, Networks or Information Systems can give Commerce students an edge in a tough job market.

There are other examples too numerous to mention. So if you have questions or want advice on what minor is best for you, can email our CDM Undergraduate Services team: gocdm@cdm.depaul.edu or call them at: 312-362-8714.

Policies for Academic Minors

Students must:

1. earn at least a grade of C- in each minor course and a GPA of no less than 2.0 for all courses in the minor;
2. earn at least a cumulative GPA of 2.0 for all courses applied to the minor;
3. not select the pass/fail option for courses in the minor
4. meet the following residency requirement: no more than 50% of the requirements of a minor may be fulfilled by transfer credits, AP credit, IB credit of CLEP credit.

Finally, students cannot earn a minor in their major program. Courses required to fulfill a minor are determined by the unit in which the minor resides.
CDM Minors for CDM Students

To obtain a minor in CDM when the major is also in CDM:

1. Satisfy all requirements for the major
2. Satisfy all requirements for the minor
3. Students must take at least 6 courses in the minor area that do not count towards their CDM major

Note: If you have already taken some of the courses listed under your minor on this page, work with your advisor to choose other courses within the same program area, ie. NT minor would look under NT major courses and Computer Graphics Software Development would look under Computer Graphics Courses, in order to have 6 distinct courses.

- Animation Minor
- Computer Graphics Software Development
- Computer Science
- Data Analysis and Data Mining
- Database
- Data Visualization Development
- Digital Cinema
- E-Commerce Technology
- Game Design
- Game Programming
- Graphic Design
- Information and Computing in the Modern World
- Interactive Media
- Information Systems
- Information Technology
- Network Technologies
- Screenwriting
- Security
- Security in the Electronic World
- Software Engineering
- Sound Design
- Television Production Minor
- Visual Computing
- Visual Effects

CDM Minor Requirements

Animation Minor

ANI 101  
Animation for Non-Majors

or ANI 201  
Animation I

ANI 230  
3D Design & Modeling

ANI 231  
3D Animation

ANI 206  
History of Animation

3 courses from the following list: (at least 1 must be ANI)

DC 201  
Introduction to Screenwriting

DC 210  
Digital Cinema Production I

DC 220  
Editing I

Any ANI course

Computer Graphics Software Development Minor

Liberal Studies

GPH 211  
Perceptual Principles for Digital Environments I

or GD 105  
Intro to Visual Design
GPH 212  Perceptual Principles for Digital Environments II

Course Requirements

CSC 261  Programming Languages I: C/C++
CSC 262  Programming Languages II: C/C++
CSC 393  Data Structures in C++
GPH 329  Computer Graphics Development II
GPH 339  Advanced Rendering Techniques
GPH 372  Principles of Computer Animation

Computer Science Minor

CSC 241  Introduction to Computer Science I
and CSC 242  Introduction to Computer Science II
and CSC 224  Java for Programmers
or
CSC 211  Programming in Java I
and CSC 212  Programming in Java II
and CSC 309  Object-Oriented Programming in C++
or
CSC 261  Programming Languages I: C/C++
and CSC 262  Programming Languages II: C/C++
and CSC 224  Java for Programmers
CSC 393  Data Structures in C++
or CSC 383  Data Structures and Algorithms in Java
MAT 140  Discrete Mathematics I
CSC 373  Computer Systems I
CSC 374  Computer Systems II

Data Analysis and Data Mining Minor

IT 240  Introduction to Desktop Databases
IT 223  Data Analysis
CSC 324  Data Analysis and Statistical Software II
CSC 367  Introduction to Data Mining
CSC 334  Advanced Data Analysis
2 CDM Electives

Database Minor

CSC 211  Programming in Java I
and CSC 212  Programming in Java II
IT 223  Data Analysis
IT 240  Introduction to Desktop Databases
CSC 352  Database Programming
CSC 367  Introduction to Data Mining
1 CDM Elective

Data Visualization Development Minor

Liberal Studies

GPH 211  Perceptual Principles for Digital Environments I
GPH 212  Perceptual Principles for Digital Environments II
Course Requirements

CSC 261  Programming Languages I: C/C++
CSC 262  Programming Languages II: C/C++
CSC 323  Data Analysis
CSC 393  Data Structures in C++
GPH 329  Computer Graphics Development II
GPH 372  Principles of Computer Animation
GPH 380  Visualization

Digital Cinema Minor

DC 205  Foundations of Cinema
DC 225  Digital Still Photography
DC 201  Introduction to Screenwriting
DC 220  Editing I
3 courses from the following list:
ANI 101  Animation for Non-Majors
DC 210  Digital Cinema Production I
DC 270  Topics in Digital Cinema
DC 215  Digital Sound Design
DC 275  Cinematography
DC 310  Digital Cinema Production II
DC 320  Editing II
DC 389  The Big Picture: The Entertainment Industry

E-Commerce Technology Minor

IT 130  The Internet and the Web
CSC 211  Programming in Java I
CSC 212  Programming in Java II
IT 230  Building Internet Applications
ECT 330  Advanced Internet Application Development
IM 210  Introduction to Human-Computer Interaction
1 course from the following list:
ECT 355  Internet Systems: Collaboration, Commerce, and Media
ECT 360  Introduction to XML
ECT 365  Web Server Operations

Game Design Minor

DC 201  Introduction to Screenwriting
GD 105  Intro to Visual Design
ANI 101  Animation for Non-Majors
or ANI 201  Animation I
ANI 230  3D Design & Modeling
GAM 224  Introduction to Game Design
or GAM 226  Game Design for Majors
GAM 244  Game Development I
GAM 245  Game Development II

Game Programming Minor

GAM 224  Introduction to Game Design
or GAM 226  Game Design for Majors
GAM 244 Game Development I
GAM 245 Game Development II
GAM 374 Action Games Programming

2 courses from the following list:
ANI 230 3D Design & Modeling
GPH 321 Computer Graphics Development I
GPH 329 Computer Graphics Development II
GPH 350 Digital Modeling II
Any other 300-Level GAM or GPH course

Graphic Design Minor

GD 105 Intro to Visual Design
GD 200 Graphic Design I
GD 300 Graphic Design II
GD 230 Typography

3 courses from the following list and/or any GD course (at least 1 must be GD):
ANI 101 Animation for Non-Majors
ANI 201 Animation I
ANI 230 3d Design and Modeling
ANI 260 Motion Graphics
ANI 360 Advanced Motion Graphics
DC 125 Digital Still Photography for Non-Majors
DC 220 Editing I
DC 225 Digital Still Photography
DC 321 Production Design
DC 376 Visual Design
IM 220 Interactive Media I
IM 222 Information Visualization
IM 320 Interactive Media II
IM 270 User-Centered Web Design
IT 130 The Internet and the Web

2 of the following courses may substitute for 1 course:
GD 350 Portfolio Workshop
GD 150 Illustrator Workshop
GD 151 Photoshop Workshop
GD 152 Digital Typography Workshop

Information and Computing in the Modern World Minor

ECT 350 Internet, Commerce and Society
HCl 201 Multimedia and the World Wide Web
IT 201 Introduction to Information Systems
IT 215 Analysis and Design Techniques
CSC 223 The Impact of Computing Technology on Our Lives
or IT 228 Ethics in Computer Games and Cinema
or CSC 208 The Computer and Social Responsibility
or IS 208 Information Technology, Economy and Society
IS 356 Knowledge Management Systems
or IS 374 Management Support Systems
or IT 398 Topics in Global Information Technology

Interactive Media Minor
Required Courses

HCI 201  Multimedia and the World Wide Web
or IT 130  The Internet and the Web
IM 210  Introduction to Human-Computer Interaction
GD 105  Intro to Visual Design
or GPH 211  Perceptual Principles for Digital Environments
IM 220  Interactive Media I
IM 270  User-centered Web Design

2 courses from the following list:
IM 222  Information Visualization
IM 208  Virtual Worlds and Online Communities
IM 230  Scripting for Interactive Media
IM 320  Interactive Media II
IM 330  Advanced Scripting for Interactive Media
IT 231  Web Development I
IM 320  Interactive Media II

Information Systems Minor

IT 240  Introduction to Desktop Databases
IT 201  Introduction to Information Systems
IT 215  Analysis and Design Techniques
IS 372  Fundamentals of Software Project Management
IS 373  Introduction to Large Systems Implementation

Information Technology Minor

IT 130  The Internet and the Web
IT 231  Web Development I
IT 240  Introduction to Desktop Databases
IT 263  Applied Networks and Security
or TDC 261  Basic Communication Systems
IT 215  Analysis and Design Techniques
1 CDM Elective

Network Technology Minor

CSC 211  Programming in Java I
or CSC 261  Programming Languages I:C/C++
CSC 212  Programming in Java II
or CSC 262  Programming Language II:C/C++
IT 201  Introduction to Information Systems
IT 263  Applied Networks and Security
TDC 362  Principles of Data Communication
TDC 363  Introduction to Local Area Networks
TDC 365  Network Interconnection Technologies

Screenwriting Minor

DC 201  Introduction to Screenwriting
DC 222  Classic Hollywood Film Structure
DC 301  Advanced Screenwriting I
DC 302  Advanced Screenwriting II
DC 303  Advanced Screenwriting III
Security Minor

**CSC 211** Programming in Java I  
and **CSC 212** Programming in Java II  
or  
**CSC 261** Programming Language I: C/C++  
and **CSC 262** Programming Language II: C/C++  
**CSC 233** Codes and Cyphers  
or **CSC 333** Cryptology  

**CNS 378** Host and Information Security  
**CNS 320** Computer Forensic and Incident Response  
**CNS 228** Legal, Ethical and Social Issues in Information Security  
**CNS 340** Fundamentals of Information Assurance

Security in the Electronic World Minor

**IT 130** The Internet and the Web  
and **IT 231** Web Development I  
and **IT 232** Web Development II  
or  
**CSC 261** Programming Language I: C/C++  
and **CSC 262** Programming Language II: C/C++  
or  
**CSC 241** Introduction to Computer Science I  
and **CSC 242** Introduction to Computer Science II  
or  
**CSC 211** Programming in Java I  
and **CSC 212** Programming in Java II  
**CNS 228** Legal, Ethical and Society Issues in Information Security  
**CNS 233** Codes and Ciphers  
**CNS 320** Computer Forensic and Incident Response  
**CNS 340** Fundamentals of Information Assurance

Software Engineering Minor

**CSC 261** Programming Languages I: C/C++  
and **CSC 262** Programming Languages II: C/C++  
and **CSC 224** Java for Programmers  
or  
**CSC 241** Introduction to Computer Science I  
and **CSC 242** Introduction to Computer Science II  
and **CSC 224** Java for Programmers  
or  
**CSC 211** Programming in Java I  
**CSC 212** Programming in Java II  
and then  
**CSC 383** Data Structures and Algorithms in Java  
**SE 325** Principles and Practices of Software Engineering  
**SE 330** Object-Oriented Modeling  
**SE 350** Object-Oriented Software Development
Sound Design Minor

DC 215 Digital Sound Design
DC 312 Music for Film and Video
DC 313 Production Sound
DC 315 Advanced Digital Sound Design

3 courses from the following list

GAM 250 Digital Sound for Computer Games
DC 317 Advanced Sound Mixing for Cinema
DC 318 Advanced Dialogue Recording and Editing
DC 319 Advanced Sound Effects Recording and Editing
DC 313 Sound for Multimedia
DC 203 History of Motion Picture Sound

Television Production Minor

DC 210 Digital Cinema Production I
DC 220 Editing I
DC 271 Introduction to Television Production
DC 272 Writing for Television
TV 289 The Business of Television
TV 320 Editing for Television
TV 301 Television Program Development
DC 372 Topics in TV Production

Visual Computing Minor

MAT 140 Discrete Mathematics I
or MAT 220 Linear Algebra with Applications
or 1 quarter of Calculus (Prerequisite for CSC 381)
IT 223 Data Analysis (Prerequisite for CSC 367)
CSC 381 Introduction to Digital Image Processing
CSC 382 Applied Image Analysis
IT 300 Research Experience
CSC 367 Introduction to Data Mining (IT 223 requirement)

Visual Effects Minor

ANI 230 3D Design & Modeling
ANI 379 Advanced 3D Compositing
DC 220 Editing I
DC 325 Color Correction
VFX 200 Introduction to Visual Effects
VFX 278 Digital Compositing I
VFX 378 Digital Compositing II

College of Computing and Digital Media - Undergraduate Studies Special Programs Professional Development

Professional Development

The College of Computing and Digital Media established the Institute for Professional Development in 1985 to
The College of Computing and Digital Media established the Institute for Professional Development in 1985 to offer certificate programs designed to meet the needs of both individuals and businesses in the Chicagoland area. These non-degree offerings provide intensive training in a wide variety of areas, with each standalone certificate program addressing a different set of theoretical concepts and practical skills. Emphasis is placed on gaining practical experience through a combination of lectures and demonstrations complemented by laboratory exercises and homework assignments. Certificate programs are typically taught by a team of instructors, that includes both full-time faculty and part-time instructors from industry. The programs require a substantial commitment of time, as most meet two nights per week and in the morning on approximately half of the Saturdays during the program.

For application and registration information pertaining to the certificate programs offered by the Institute for Professional Development, please call the Institute office at (312) 362-6282.

Current certificate program offerings include:

**IPD 354 Cloud Computing Infrastructure and Operations Program**
A 6-week program in the architectures, infrastructure, and operations of Cloud Computing

**IPD 355 Cloud Computing Fundamentals Program**
An 11-week program in the principles, methods, and technologies of Cloud Computing

**IPD 356 Web Development with Ajax Technologies Program**
A 7-week program covering Web development with Ajax technologies

**IPD 357 Wireless LAN Security Program**
An 8-week program covering the latest solutions in wireless LAN security

**IPD 358 SharePoint Developer Program**
A 10-week comprehensive program covering Microsoft SharePoint development

**IPD 359 Web Development with Python Program**
A 5-week program covering Web development with the Python programming language.

**IPD 360/460 SQL Server Business Intelligence Program**
An 11-week in-depth program covering SQL Server analysis services, integration services, and reporting services

**IPD 363 SQL Server Database Administration Program**
An 11-week in-depth program covering database administration using SQL Server

**IPD 364 Lightweight Java Web Development Program**
An 8-week comprehensive program covering open-source, lightweight Java enterprise Web development using POJOs (Plain Old Java Objects)

**IPD 365 Ruby on Rails Program**
A 8-week in-depth program covering Web development using Ruby on Rails

**IPD 366 Java Web Services Program**
A 7-week concentrated program covering service-oriented architecture and the development of Web services using Java

**IPD 370 Advanced SQL Program**
A 2-week program covering advanced Structured Query Language (SQL) features

**IPD 380 IT Project Management Program**
A 10-week comprehensive program covering best practices in IT project management

**IPD 382 Java Developer Program**
A 10-week comprehensive program covering object-oriented applications development using Java

**IPD 389 .NET Developer Program**
A 10-week comprehensive program covering .NET technologies
Combined Bachelor/Master Degrees

Academically gifted students may choose to enroll in the combined degree program. This dual degree program allows students to combine any CDM bachelor's degree with any CDM master's degree, except the joint MA/JD and joint MS/JD degree programs, following the structure outlined below.

Program Structure

Students in the combined degree program take a maximum of three graduate level courses that count toward both their bachelor's and master's degree requirements. Students may enroll in graduate level coursework in the junior and senior year only. Students in the combined degree program will receive the bachelor's degree after meeting all graduation requirements including the standard 192 undergraduate credit hours. The master's degree is awarded after the student completes 10 additional graduate courses (40 credit hours), instead of the standard 13 courses (52 credit hours).

Admission Criteria

- Minimum of 6 courses (24 credit hours) completed at DePaul
- GPA of 3.3 or higher in courses taken at DePaul
- Endorsement of faculty advisor

In order to apply for the BS/MS combined degree program, your faculty advisor must send an e-mail recommendation to Becky Krochmal. The recommendation should include your full name, student ID number, and the BS and MS degrees you wish to apply for.

Bachelor of Arts in Computing students who are enrolled via the School for New Learning are eligible for this program. Interested students who meet the admission criteria for a combined degree should contact Kenn Skorupa at SNL or Becky Krochmal at CDM for more information.

Maintaining Good Standing

- Each student's cumulative GPA and course grades will be reviewed after each Autumn, Winter, and Spring Quarter
- The student and Faculty Advisor will be notified when the student's cumulative GPA falls below 3.3 or when the student receives less than a C- in graduate level course.
- If a student's cumulative GPA falls below 3.3, the student must earn a term GPA of 3.3 or above in the following quarter to stay active. If the student does not achieve a 3.3 term GPA, then the student will be dismissed from the combined program and resume the traditional BA/BS. As long as the student's cumulative GPA is below 3.3, the student must continue to achieve at least a 3.3 term GPA in all following quarters or face dismissal. If, at any point, the student's cumulative GPA is once again 3.3 or higher, term requirements no longer apply.
- If a student does not maintain good standing, they will be dismissed from the Combined Degree and returned to normal undergraduate degree seeking status. Any graduate courses passed before dismissal will not be counted toward graduate credit and may not be retaken (if the student does pursue graduate study, other graduate courses must be substituted). If dismissed students wish to apply to a CDM graduate degree program, they may do so following normal CDM Admission procedures, but will still be required to take 13 graduate courses for a MS degree.

Bachelor's Degree to Master's Degree Transition

After completing the undergraduate degree, when the student is ready to begin the graduate degree, the student should email Becky Krochmal who will process the change of status.

If, upon completion of the bachelor's degree, the student did not meet all prerequisites for the master's degree, then the student will need to complete (course, test or waiver) the missing prerequisites for the chosen master's Degree. If, while still in the undergraduate degree phase, the student receives less than a C- in graduate level course, the course cannot count towards the MS/MA Degree.

Designing a Course of Study

It is extremely important that the student and faculty advisor work together on a course of study immediately upon admission to the Combined Degree Program.
This course of study may include which undergraduate classes to avoid taking in order to take the graduate version. Failure to put together a solid plan can lead to extra coursework and a lengthening of the Combined Degree program.

It is advisable for the student and advisor to enter the proposed plan of study in the student communication record on the CDM intranet so it is available to the student and CDM faculty and staff.

Registering for Master's Degree Courses

Starting in Fall 2010, students will be enrolled in the graduate class instead of the special "Combined Degree Course". The student's advisor must email Associate Dean Lucia Dettori requesting the enrollment. The following information should be included in the email: student's full name, DePaul ID, graduate course and section, and the undergraduate course to be substituted for. Student services will process the enrollment.
Courses

Please visit Campus Connection at https://campusconnect.depaul.edu for current course information. If you do not have a password for Campus Connection you may log on as a guest. Once you are on Campus Connection please select Course Catalog followed by the department.