

# CYBERSECURITY (BS)

The BS in Cybersecurity prepares students to evaluate and manage an organization's computer, information and network security, as well as develop a solid information technology infrastructure.

Program Requirements	Quarter Hours
Liberal Studies Requirements	76
Major Requirements	100
Open Electives	16
<b>Total hours required</b>	<b>192</b>

## Learning Outcomes

Students will be able to:

- Identify the information security services provided by "Confidentiality," "Integrity," and "Availability" (CIA).
- Analyze the security controls present in an environment and identify any improvements needed to implement fully a defense-in-depth model.
- Design an enterprise infrastructure that implements a defense-in-depth model.
- Develop security policies for an enterprise environment.
- Interpret how some of the legal and regulatory requirements impact an enterprise environment.
- Evaluate the threat sources, attack vectors and asset vulnerabilities in an enterprise environment via a risk assessment.

## Liberal Studies Requirements

Honors program requirements can be found in the individual Colleges & Schools section of the University Catalog. Select the appropriate college or school, followed by Undergraduate Academics and scroll down.

First Year Program	Hours
<b>Chicago Quarter</b>	
LSP 110 DISCOVER CHICAGO or LSP 111 or EXPLORE CHICAGO	4
<b>Focal Point</b>	
LSP 112 FOCAL POINT SEMINAR	4
<b>Writing</b>	
WRD 103 COMPOSITION AND RHETORIC I <sup>1</sup>	4
WRD 104 COMPOSITION AND RHETORIC II <sup>1</sup>	4
<b>Quantitative Reasoning</b>	
Not Required	
<b>Sophomore Year</b>	
<b>Race, Power, and Resistance</b>	
LSP 200 SEMINAR ON RACE, POWER, AND RESISTANCE	4
<b>Junior Year</b>	
<b>Experiential Learning</b>	
Required	4
<b>Senior Year</b>	
<b>Capstone</b>	
Required in major <sup>1</sup>	

<sup>1</sup> Students must earn a C- or better in this course.

## Learning Domains

**Arts and Literature (AL)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/arts-and-literature/>)

- 3 Courses Required

**Historical Inquiry (HI)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/historical-inquiry/>)

- 2 Courses Required

**Math and Computing (MC)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/math-and-computing/>)

- Not Required

**Philosophical Inquiry (PI)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/philosophical-inquiry/>)

- 2 Courses Required (See note below)

**Religious Dimensions (RD)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/religious-dimensions/>)

- 2 Courses Required (See note below)

**Scientific Inquiry (SI)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/scientific-inquiry/>)

- 1 Lab Course Required

**Social, Cultural, and Behavioral Inquiry (SCBI)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/social-cultural-and-behavioral-inquiry/>)

- 3 Courses Required

## Notes

Students must take one of the following ethics courses: CSC 208 (PI), IT 228 (PI), PHL 248/MGT 248 (PI) or REL 228/MGT 228 (RD)

Specified required courses within Liberal Studies may have grade minimums (e.g. C- or better). Please consult your advisor or your college and major requirements.

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 Experiential Learning 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 student's 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.

## Major Requirements

### First Year

Course	Title	Quarter Hours
CSC 241	INTRODUCTION TO COMPUTER SCIENCE I <sup>1</sup>	4
CSC 242	INTRODUCTION TO COMPUTER SCIENCE II <sup>1</sup>	4
CSEC 100	CYBERSECURITY ORIENTATION	2
CSEC 101	CYBERSECURITY TECHNOLOGIES OVERVIEW	2
IT 263	APPLIED NETWORKS AND SECURITY	4
MAT 140	DISCRETE MATHEMATICS I	4
NET 363	INTRODUCTION TO LOCAL AREA NETWORKS	4

<sup>1</sup> Students with one (1) semester programming experience may take CSC 243 and one (1) additional Major Elective in lieu of CSC 241 and CSC 242.

### Second Year

Course	Title	Quarter Hours
CSC 233 or CSC 333	CODES AND CIPHERS CRYPTOLOGY	4
CSC 300	DATA STRUCTURES I	4
CSC 301	DATA STRUCTURES II	4
CSC 355	DATABASE SYSTEMS	4
CSC 373	COMPUTER SYSTEMS I	4
CSC 374	COMPUTER SYSTEMS II	4
CSEC 340	FUNDAMENTALS OF INFORMATION ASSURANCE (FORMERLY CNS 340)	4
NET 365	NETWORK INTERCONNECTION TECHNOLOGIES	4

### Third Year

Course	Title	Quarter Hours
NET 377	FUNDAMENTALS OF NETWORK SECURITY	4
NET 379	TELECOMMUNICATION AND NETWORK SECURITY PRACTICUM	4
CSEC 320	COMPUTER FORENSIC AND INCIDENT RESPONSE (FORMERLY CNS 320)	4
CSEC 378	HOST BASED SECURITY (FORMERLY CNS 378)	4

### Fourth Year

Course	Title	Quarter Hours
CSEC 228	LEGAL, ETHICAL AND SOCIAL ISSUES IN INFORMATION SECURITY (FORMERLY CNS 228)	4
CSEC 388	SECURITY TESTING AND ASSESSMENT (FORMERLY CNS 388)	4
CSEC 394	INFORMATION SYSTEMS SECURITY ENGINEERING I	4

CSEC 395	INFORMATION SYSTEMS SECURITY ENGINEERING II (FORMERLY CNS 395)	4
CMNS 201	BUSINESS AND PROFESSIONAL COMMUNICATION	4
Eight (8) credit hours of Major Electives		8

## Major Electives

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

Course	Title	Quarter Hours
Major Electives can be chosen from the list below:		
CSC 281	WORKSHOP. JAVA FOR PROGRAMMERS	
CSC 282	WORKSHOP. LINUX FOR PROGRAMMERS	
any 300 level CSEC, NET, CSC, SE, IS, or IT courses.		

## Open Electives

Open elective credit also is required to meet the minimum graduation requirement of 192 hours.

## 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 WRD 103, WRD 104, and all Major and Minor courses
- Earn a grade of D or higher in all other Liberal Studies and Open Elective courses
- Maintain a cumulative GPA of 2.0 or higher