

BS in Cybersecurity (Fall 2024 & Later)

Minimum 120 credits required for Bachelor's degree

Foundational Core (27-29 Credits)		Grade	Credits
FYWS-125 ¹	First Year Seminar		3
Choose 1 course from each area *			
Math	MA 151		4
² Natural/Physical Science			3
Literature			3
History	HI-100, HI-102 or HI-110		3
Arts/Design/Comm.			3
Philosophy			3
Theology/Relig			3
Social/Behavioral Science			3

Human Journey Seminars: Great Books in CIT (6 Credits)

CIT 201	CIT Seminar I		3
CIT 202	CIT Seminar II		3

Liberal Arts Explorations (LAE) (12 Credits Total)

Student must complete 4 courses from at least 2 different subjects and one course in each area. (see list on Registrar's Website - checksheets)			
Humanistic Inquiry (3 credits)			3
Social and Global Awareness (3 credits)			3
CS 319	Computer Ethics		
Scientific Literacy (3 credits)			3
LAE in any area (3 credits)			3

* See list of courses.

¹(Requires Grade C or higher)

²Science/Natural Science courses includes

approved Math and Computer Science courses. Students are required to take at least one course in Biology, Chemistry, or Physics in the Foundational or Liberal Arts Exploration Core. CS and MA courses may be used as a Science/Natural Science

in either the Foundational Core or as a requirement in the LAE Core but not in both categories.

Note: MA 006 and ESL courses **will not** count towards the 120 credit graduation requirement. Approved Study Abroad courses may be used

to satisfy requirements for the foundational core or a Liberal Arts Exploration

A maximum of 8 Applied Music credits may be applied towards graduation

80 CR CYBERSECURITY MAJOR

Required Cybersecurity Courses (40 credits)		Grade
CSE 125	Computer Science and Engineering Explorations	
CY 125	Cybersecurity Explorations	
CY 211	Computer Networks	
CY 212	Web Development in UNIX	
CY 221	Foundations of Cybersecurity	
CY 312	Introduction to Cryptography	
CY 367	Network Security	
CY 321	Cybersecurity Standards, Laws, and Policies	
CY 324	Forensic Computing	
CY 325	Usable Security and Privacy	
CY 410	Software and System Security	
CY 413	Internship in Cybersecurity	
CY 420	Vulnerability Assessment and Penetration Testing	
CY 417	Cybersecurity Capstone Project I	
CY 418	Cybersecurity Capstone Project II	

Elective Courses (9 credits)		Grade
CY 414	Directed Research in Cybersecurity	
CY 419	Cooperative Studies in Cybersecurity	
CY 421	Cloud Computing: Architecture, Operations and Security	
CY 422	Web and Application Security	
CY 423	Wireless Network Security	
CY 424	Emerging Trends in Cybersecurity	

Required Computer Science Courses (21 credits)		Grade
CS 111	Introduction to Structured Programming	
CS 112	Data Structures	
CS 113	Discrete Structures	
CS 215	Computer Systems Organization with Assembler	
CS 241	Advanced Programming Concepts	
CS 311	Database Design	
CS 349	Operating Systems	

Required Supporting Courses (10 credits)		Grade
MA 151	Calculus I	
CS 319	Computer Ethics**	
CSE 300	Stat and Prob for CS and ENGR**	
MUST HAVE GRADE OF "C" OR BETTER		

Checksheet Key

T	Course transferred and Requirement satisfied
W	Requirement waived
TW	Course transferred and Requirement waived

SACRED HEART UNIVERSITY
Welch College of Business

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SUGGESTED FOUR YEAR SEQUENCE OF STUDY:

YEAR 1	SEMESTER 1	YEAR 1	SEMESTER 2
FYWS125	First Year Seminar	CS 112	Data Structures
MA 151	Calculus I	CS 113	Discrete Structures
CS 111	Intro to Structured Programming	CY 125	Cybersecurity Explorations
CSE 125	CSE Explorations	CORE	Foundational Core
CORE	Foundational Core	CORE	Foundational Core

YEAR 2	SEMESTER 3	YEAR 2	SEMESTER 4
CY 211	Computer Networks	CY 221	Foundations of Cybersecurity
CY 212	Web Development in UNIX	CS 215	Computer Systems Organization with Assembler
CS 241	Advanced Programming Concepts	LAE	LAE Humanistic Inquiry
CIT 201	CIT Seminar I	CIT 202	CIT Seminar II
CORE	Foundational Core	CSE 300	Stat and Prob for CS and ENGR

YEAR 3	SEMESTER 5	YEAR 3	SEMESTER 6
CS 319	Computer Ethics (LAE Awareness)	CY 321	Cybersecurity Standards, Laws, and Policies
CY 312	Introduction to Cryptography	CY 324	Forensic Computing
CY 367	Network Security	CS 349	Operating Systems
CS 311	Database Design	CY 325	Usable Security and Privacy
CORE	Foundational Core	CORE	Foundational Core
LAE	Scientific Literacy	LAE	LAE in any area

YEAR 4	SEMESTER 7	YEAR 4	SEMESTER 8
CY 410	Software and System Security	CY 420	Vulnerability Assessment and Penetration Testing
CY 413	Internship in Cybersecurity	CY Elec	CY Elective
CY 417	Cybersecurity Capstone Project I	CY 418	Cybersecurity Capstone Project II
CY Elec	CY Elective	CORE	Foundational Core
CY Elec	CY Elective		

effective Fall 2024