

BS in Computer Engineering (Fall 2024 & Later)

Minimum 120 credits required for Bachelor's degree

Foundational Core (27-29 Credits)

	Grade
FYWS-125 ¹	First Year Seminar
MA ²	Foundational Core Math course
Choose 1 course from each area *	
^{3,4} Natural/Physical Science	
Literature	
History	HI-100, HI-102 or HI-110
Arts/Design/Comm. ⁵	
Philosophy	
Theology/Relig	
Social/Behavioral Science ⁶	

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

CIT 201	CIT Seminar I
CIT 202	CIT Seminar II

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)	
Social and Global Awareness (3 credits)	
See Note 7	
Scientific Literacy (3 credits)	
See Note 8	
LAE in any area (3 credits)	

* See list of courses.

¹(Requires Grade C or higher)

² Fulfilled by MA 151

³ Fulfilled by PY 151

⁴Science/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.

⁵ AR 114 is recommended

⁶ EC 202 is recommended

⁷ Fulfilled by CS 319

⁸ Fulfilled by PY 152

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

Required Curriculum for Degree in Major

Required courses	Grade
CS 111	Introduction to Structured Programming
CS 112	Data Structures
CS 113	Discrete Structures
CS 339	Networking and Data Communications
CSE 125	CSE Explorations
ENGR 125	Engineering Explorations
ENGR 200	Computational Methods in Engr
ENGR 211	Circuits and Systems with Lab
ENGR 212	Digital Design with Lab
ENGR 311	Comp Arch and Design with Lab
ENGR 313	Signal Processing with Lab
ENGR 324	Embedded Systems with Lab
	Elective
	Elective
	Elective
CPE 413	Internship in Engineering
CPE 417	Engineering Design Project I
CPE 418	Engineering Design Project II

Credits	Prerequisites
3	None
3	CS 111
3	None
3	CS 112
1	None
1	None
4	CS 112
4	MA 152 (co-req)
4	CS 113
4	ENGR 212
4	ENGR 211, MA 254 (co
4	CS 112, ENGR 200
3	BU 296, ENGR 200, 21
2	ENGR 324
3	EE 417

Required Supporting courses	Grade
BU 296	Career Development and Readiness
MA 151	Calculus I
MA 152	Calculus II
MA 253	Calculus III
MA 254	Differential Equations
MA 261	Linear Algebra
CSE 300	Stat and Prob for CS and ENGR
CS 319	Computer Ethics
PY151/153	Principles of Physics I and Lab
PY152/154	Principles of Physics II and Lab

Credits	Prerequisites
0	None
4	MA 140
4	MA 151
4	MA 152
3	MA 152
4	MA 152
3	MA 151
3	PH 1xx/2xx
4	MA 152
4	PY 151

Electives (4 courses or 3 + Coop, 12-16 credits)	Grade
MGT 101	Organization Management
EC 202	Principles of Microeconomics
AC 221	Financial Accounting and Reporting
MK 201	Principles of Marketing
FN 215	Financial Management
CS 332	Cloud Computing
CY 367	Network Security
ENGR 314	Directed Research in Engr
ENGR 315	Analog Circuits with Lab
ENGR 325	FPGA Design with Lab
ENGR 339	Power Systems with Lab
ENGR 349	Electromagnet Theory with Lab
ENGR 350	Sensors & Robotics with Lab
ENGR 351	PCB Design with Lab
ENGR 353	VLSI Design with Lab
ENGR 411	Adv Image Proc with Lab
ENGR 419	Cooperative Studies in Engineering

Credits	Prerequisites
3	None
3	MA 140
3	None
3	None
3	AC 221
3	CS 112, 339
3	CS 339
3	ENGR 200, 211, 212
4	ENGR 211
4	ENGR 212
4	ENGR 211
4	MA 152
4	ENGR 200, 211, 212
4	ENGR 211
4	ENGR 211
4	ENGR 313
6	ENGR 200, 211, 212

Checksheet Key

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

SACRED HEART UNIVERSITY
School of Computer Science and Engineering

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SUGGESTED FOUR YEAR SEQUENCE OF STUDY:

YEAR 1	SEMESTER 1	YEAR 1	SEMESTER 2
FYWS 125	First Year Seminar		LAE in any area
MA 151	Calculus I	MA 152	Calculus II
CS 111	Intro to Structured Programming	CS 112	Data Structures
CSE 125	CSE Explorations	CS 113	Discrete Structures
HI 100 or 102	Foundational Core 1/6	ENGR 125	Engineering Explorations

YEAR 2	SEMESTER 3	YEAR 2	SEMESTER 4
CIT 201	CIT Seminar I	CIT 202	CIT Seminar II
ENGR 212	Digital Design with Lab	ENGR 211	Circuits and Systems with Lab
MA 253	Calculus III	MA 254	Differential Equations
PY 151/153	Principles of Physics I / Lab	PY 152/154	Principles of Physics II / Lab
		ENGR 200	Computational Methods in ENGR

YEAR 3	SEMESTER 5	YEAR 3	SEMESTER 6
	Elective 1/4	MA 261	Linear Algebra
ENGR 311	Computer Architecture & Design with Lab	CSE 300	Stat and Prob for CS and ENGR
CS 339	Networking and Data Communication	ENGR 313	Signal Processing with Lab
	Elective 2/4		Elective 3/4
	Foundational Core 2/6	ENGR 324	Embedded Systems with Lab
		BU 296	Career Development and Readiness

YEAR 4	SEMESTER 7	YEAR 4	SEMESTER 8
CPE 417	Engineering Design Project I	CPE 418	Engineering Design Project II
CPE 413	Internship in Engineering		Elective 4/4
CS 319	Computer Ethics (LAE awareness)		Foundational Core 4/6
	LAE Humanistic Inquiry		Foundational Core 5/6
	Foundational Core 3/6		Foundational Core 6/6

Note: Foundational Core should be completed by...