Computer Engineering

BS in Computer Engineering (Fall 2018 & Later)

Minimum 120 credits required for Bachelor's degree

Foundational Core (30-32 Credits)		Grade
FYXX 125[1]	First Year Seminar	
CTL 125	Critical Thinking	
MA ____	Foundational Core Math course [3]	
Choose 1 course from each area *		
[2]Natural and Physical Science [4]		
Literature		
History	HI-100 or HI-102	
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 (9 Credits Total)

Student must complete one course in each area. (see list on Registrar's Website - checksheets)		
Humanistic Inquiry (3 credits)		
Social and Global Awareness		
Scientific Literacy (3 credits)[7]		

* See list of courses.

[1](Requires Grade C or higher)

[2]Science/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.

[3] MA106/MA140/MA151 may count in this area

[4] PY151/153 may count in this area

[5] AR114 is recommended

[6] EC101 or EC202 is recommended

[7] MA331 may count in this area

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

79 credits **COMPUTER ENGINEERING MAJOR**

ENGINEERING COURSES		Grade
ENGR 101	Engineering Explorations I	
ENGR 102	Engineering Explorations II	

COMPUTER ENGIENEERING COURSES		Grade
CPE 211	Circuits and Systems with Lab	
CPE 212	Digital Design with Lab	
CPE 311	Computer Architecture & Design with Lab	
CPE 313	Systems and Signal Processing with Lab	
CPE 324	Embedded Systems with Lab	
CPE 417	Engineering Design Project I	
CPE 418	Engineering Design Project II	
CPE	CPE elective	
CPE	CPE elective	
CPE	CPE elective or internship	
CPE	CPE elective or internship	

COMPUTER SCIENCE COURSES		Grade
CS 111	Introduction to Structured Programming	
CS 112	Data Structures	
CS 113	Discrete Structures	
CS 215	Comp. Systems Organization/Assembler	
CS 319	Computer Ethics	
CS 339	Networking and Data Communications	
CS 349	Operating Systems	

Required Supporting Courses *		Grade
MA 151	Calculus I	
MA 152	Calculus II	
MA 253	Calculus III	
MA 354	Differential Equations	
MA 261	Linear Algebra	
MA 331	Probability **	
PY151/153	Principles of Physics I and Lab	
PY152/154	Principles of Physics II and Lab	
MUST HAVE GRADE OF "C" OR BETTER		

General Electives (number of credits vary)		Grade

Checksheet Key

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

** Counts in LAE

WELCH COLLEGE OF BUSINESS

BS in Computer Engineering (Fall 2018 & Later)

The Computer Engineering field has grown tremendously in the past decade. Almost every electronic device including but not limited to vehicles, computers, smart phones/tablets, and smart buildings require Computer Engineers at the design and implementation process during the development. Sacred Heart University responded this growth by starting the brand new Computer Engineering program that is built on School of Computer Science and Engineering's already established Computer Science programs. By taking advantage of student-oriented faculty and growing interest of the neearby companies, Computer Engineering graduates of Sacred Heart University will succesfully join the work force. Students will learn the basics of computing and programming and have the opportunity to apply their skills in laboratory oriented, hands-on hardware courses.

The curriculum is designed to provide the Computer Engineering major with the latest up-to-date information. Starting with unique Engineering Explorations course with 3d printers, drones, and robots, courses in C programming, C++, Networking, and Operating Systems will be incorporated with laboratory courses in Analog and Digital Circuits, Computer Architecture, Signals and Systems, several electives, and a year long capstone project.

The Computer Engineering major is required to successfully complete 79 credit hours. The remaining credits required for graduation are within the liberal arts core curriculum.

Computer Engineering

YEAR 1	SEMESTER I	YEAR 1	SEMESTER 2
FYS 125	First Year Seminar	CTL 125	Critical Thinking
MA 151	Calculus I	MA 152	Calculus II
CS 111	Intro to Structured Programming	CS 112	Data Structures
ENGR 101	Engineering Explorations I	CS 113	Discrete Structures
	Foundational Core	ENGR 102	Engineering Explorations II
			Foundational Core
YEAR 2	**SEMESTER 3**	**YEAR 2**	**SEMESTER 4**
CIT 201	CIT Seminar I	CIT 202	CIT Seminar II
CPE 211	Circuits and Systems with Lab	CS 215	Computer Sys Org with Assembler
MA 253	Calculus III	CPE 212	Digital Design with Lab
PY 151/153	Principles of Physics I / Lab	MA 354	Differential Equations
	Foundational Core	PY 152/154	Principles of Physics II / Lab
YEAR 3	**SEMESTER 5**	**YEAR 3**	**SEMESTER 6**
CPE 311*	Computer Architecture & Design with Lab	MA 261	Linear Algebra
MA 331	Probability (LAE Literacy)	CPE 324*	Embedded Systems with Lab
CPE 313*	Systems and Signal Processing with Lab	CS 339	Networking and Data Communication
CS 319	Computer Ethics (LAE awareness)	CS 349	Operating Systems
	Foundational Core		Foundational Core
YEAR 4	**SEMESTER 7**	**YEAR 4**	**SEMESTER 8**
CPE 417*	Engineering Design Project I	CPE 418*	Engineering Design Project II
	Internship or Technical Elective		Internship or Technical Elective
CPE -----*	CE Elective	CPE -----*	CE Elective