

BACHELOR OF SCIENCE COMPUTER ENGINEERING

Computer Engineering students develop an ability to integrate electronic engineering with computer sciences to design and develop software and hardware components of modern computing systems, computer controlled equipment and other technological devices. Computer engineering provides engaging learning experiences to help students to engage in a number of areas such as analyzing and designing anything from simple microprocessors to highly featured circuits, software design, and operating system development. Graduates of the program are prepared for careers in a wide variety of areas such as software design, electronic engineering and integrating software and hardware.

*College of
Science,
Engineering,
and Technology*



COURSE TYPE DESCRIPTIONS

General Education Core	GEC	General Education Core (GEC) courses are courses that every student must take in order to obtain a degree from Jackson State University. GEC courses are essential to every undergraduate degree at Jackson State University. Collectively, there are 30 credit hours of GEC course requirements.
General Education Pathway	PATH	General Education Pathway (PATH) courses are courses that are connected through interdisciplinary themes and are selected at the student's discretion to fulfill the general education curriculum. Through experiential learning and reflective writing, students will have the opportunity to integrate knowledge across courses, develop their skills and an enhanced sense of civic responsibility. Students select nine (9) hours from the pathway of choice. Each pathway concludes with a related one (1) credit hour a University Required (UR) course.
University Required	UR	University Required (UR) courses are courses that are specific to Jackson State University and are designed to integrate students within the Jackson State University community by promoting student success resources, strategies and high impact practices.
Degree Program Requirement	DPR	Degree Program Required (DPR) courses are courses that are required for completion of a degree program within the specified major.
Electives	DPE or GEL	Electives are courses selected at a student's discretion and provide opportunities for students to pursue their academic interests. There are two types of electives. Degree Program Elective (DPE) courses are elective courses that are partially restricted such that students select courses from a specified group of identified courses (e.g., departmental elective courses) to fulfill a particular requirement. General Elective (GEL) courses are courses that may be selected from any program for which the student has fulfilled the proper prerequisites.
Professional Concentrations	PC	Professional Concentration (PC) courses complement Degree Program Required courses and allow students to have a concentrated area of study within the major.



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Computer Engineering Technical Electives

Students must choose nine (9) hours of technical electives from the following list of courses:

COURSE	COURSE TITLE	CREDIT HOURS
ECE 345	Electromagnetics	3
ECE 430	Digital VLSI Design	3
ECE 431	Digital Systems Testing	3
ECE 440	Communications Systems	3
ECE 451	Digital Signal Processing	3
ECE 492	Special Studies in ECE	3
ECE 493	Special Topics in ECE	3

Comments: Course substitutions require the Department Chair's approval.

Student Name: _____

J-Number: _____

Expected Graduation Date: _____

Advisor: _____

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Pathway: _____

FRESHMAN YEAR FALL 1ST SEMESTER

COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
UNIV 100	University Success	2	UR		
ENG 104	Composition I	3	GEC		
MATH 241	Calculus I	3	GEC		
CSC 118	Computer Science I	3	DPR		
ECE 101	Intro to Electrical & Computer Engineering	2	DPR		
	Humanities & Fine Arts Option	3	GEC		
	TOTAL CREDIT HOURS	16	TERM GPA:		

Comments:

FRESHMAN YEAR SPRING 2nd SEMESTER

COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
MATH 242	Calculus II	3	DPR		
ENG 105	Composition II	3	GEC		
PHY 211 & PHY 211	General Physics & Lab	4	GEC		
ECE 212 & ECEL 212	Digital Logic & Lab	4	DPR		
	Pathway Option	3	PATH		
	TOTAL CREDIT HOURS	17	TERM GPA:		

Comments:

SOPHOMORE YEAR FALL 1ST SEMESTER

COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
MATH 243	Calculus III	3	DPR		
PHY 212 & PHY 212	General Physics II & Lab	4	GEC		
CSC 119	Computer Science II	3	DPR		
ECE 220 & ECEL 220	Circuit Theory & Lab	4	DPR		
	Pathway Option	3	PATH		
	TOTAL CREDIT HOURS	17	TERM GPA:		

Comments:

SOPHOMORE YEAR SPRING 2ND SEMESTER

COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
UNIV 200	Civic Engagement	1	UR		
MATH 244	Calculus IV	3	DPR		
ECE 312	Computer Organization	3	DPR		
ECE 330 & ECEL 330	Electronics I & lab	4	DPR		
ECE 252	Engineering Analysis	3	DPR		
	Pathway Option	3	PATH		
	TOTAL CREDIT HOURS	17	TERM GPA:		

Comments:

JUNIOR YEAR FALL 1ST SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
MATH 368	Ordinary Differential Equations	3	DPR		
ECE 315	Synthesis with HDL	3	DPR		
ECE 360 & ECEL 360	Embedded Microprocessor & Lab	4	DPR		
CIV 222	Engineering Mechanics I	3	DPR		
CSC 225	Discrete Structures	3	DPR		
	TOTAL CREDIT HOURS	16	TERM GPA:		
Comments:					

JUNIOR YEAR SPRING 2ND SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
MATH 307	Probability & Statistics	3	DPR		
ECE 351	Signals & Systems	3	DPR		
ECE 412	Computer Architecture	3	DPR		
CSC 228	Data Structures & Algorithms	3	DPR		
CIV 355	Engineering Economy	3	DPR		
	TOTAL CREDIT HOURS	15	TERM GPA:		
Comments:					

SENIOR YEAR FALL 1ST SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
ECE 490	Senior Project Design I	3	DPR		
CSC 325	Operating Systems	3	DPR		
CHEM 141 & CHML 141	General Chemistry I & Lab	4	DPR		
	Technical Elective I	3	DPE		
	Humanities & Fine Arts Option	3	GEC		
	TOTAL CREDIT HOURS	16	TERM GPA:		
Comments:					

SENIOR YEAR SPRING 2ND SEMESTER					
COURSE	COURSE TITLE	CREDIT HOURS	COURSE TYPE	GRADE	SUCCESS MARKER/NOTE
CSC 491	Senior Project Design II	3	DPR		Spring Only
	Technical Elective II	3	DPE		
	Technical Elective III	3	DPE		
	Social & Behavioral Science Option	3	GEC		
	TOTAL CREDIT HOURS	12	TERM GPA:		
Comments:					

TOTAL HOURS: 126 REQUIRED

Candidates that transfer 12 or more hours of college credit are exempt from UNIV 100: University Success; however, the student must take 2 hours of general electives to replace UNIV 100.

Student Signature: _____

Advisor Signature: _____