Generic Study Plan for Computer Engineering (Effective Fall 2025)

Year 1 - First Semester				Year 1 - Second Semester			
Course #.	Course Title	Pre/Co Req	Cr.	Course #.	Course Title	Pre/Co Requisite	Cr.
GEAE 101	Acad English for Humani & STEM		3	CENG202	Discrete Mathematics	MATH105	3
MATH105	Calculus I	-	3	MATH110	Calculus II	MATH105	3
CSBP119	Algorithms and Problem Solving	-	3	CSBP219	Object-Oriented Programming	CSBP119	3
PHYS105	General Physics I	-	3	CENG205	Digital Design & Comp Org.		3
CENG110	Artificial Intel. Concepts & Appl	-	3	CSBP221	Programming Lab II	CSBP219 (co)	1
CSBP121	Programming Lab I	CSEB119 (Co)	1	MATH140	Linear Algebra 1		3
PHYS135	General Physics Lab I	Pre/Co PHYS105	1				
	Semester Credit Hours		17		Semester Credit Hours		16
Year 2 - First Semester				**Year 2 - Second Semester**			
Course #.	Course Title	Pre-Req.	Cr.	Course #.	Course Title	Pre-Req.	Cr.
CENG210	Comm. & Network Fundamentals	PHYS105 CENG205 (Pre/Co)	3	MATH 275	Ordinary Diff. Equation	MATH110 & MATH140	3
CENG201	Circuits Fundamentals	PHYS105	3	CENG221	Computer Architecture	CENG205	3
CENG231	Circuits Lab	Pre/Co CENG201	1	STAT210	Probability & Statistics	MATH110	3
PHYS110	General Physics II	PHYS 105	3	CSBP315	Operating Systems Fund.	CENG205	3
CSBP319	Data Structures	CSBP219	3	BIOC100 OR CHEM111	Basic Biology or General Chemistry 1	-	3
GEEM110	Contemp. Emirates Studies		3	PHYS140	General Physics Lab II	PHYS135	1
	Semester Credit Hours		16		Semester Credit Hours		16
Year 3 - First Semester				**Year 3 - Second Semester**			
Course #.	Course Title	Pre-Req.	Cr.	Course #.	Course Title	Pre-Req.	Cr.
ITBP301	Security Principles and Practice	CENG210	3	CENG324	Digital System Design	CENG221	3
CENG328	Introduction to Embedded Systems	CENG221	3	CENG325	Digital Design Lab	Pre/Co CENG324	1
CENG329	Introduction to Embedded Systems Lab	Pre/Co CENG328	1	CENG340	Autonomous Systems: Fundamentals and Applications	CENG328	3
GESU121	Sustainability		3	CENG341	Autonomous Systems Lab	Pre/Co CENG340	1
CENG320	Signals & Systems I	MATH275	3		Major Technical Elective 1		3
CENG329	Networking Lab	CENG210	1	ITBP270	Professional Respons. in IT	ESPU1081	2
Elective	Cultural Elective 1	-	3	Elective	Cultural Elective 1	-	3
	Semester Credit Hours		17		Semester Credit Hours		16
Year 4 - First Semester				**Year 4 - Second Semester**			
Course #.	Course Title	Pre-Req.	Cr.	Course #.	Course Title	Pre-Req.	Cr.
SWEB300	Software Engineering Fund.	CSEB219	3	ITBP481	Senior Graduation Pro. II	ITBP480	3
ITBP218	Entrepreneurship in IT		3		Major Technical Elective 4		3
ITBP480	Senior Graduation Project I*	STAT210	3	Elective	Free Elective 1		3
	Major Technical Elective 2		3	Elective	Free Elective 2		3
	Major Technical Elective 3		3				
	Semester Credit Hours		15		Semester Credit Hours		12
Year 5 - First Semester							
ITBP495: Internship (6 credit hours) *(Students are not Allowed to register any additional courses during their internship without the approval of the College)*							

Total = 131 credit hours

*Students have to finish 90 CrHr to register in ITBP480

Major Elective Courses: CENG400-Distributed Computing and Data Engineering, CENG410-Distributed Systems, Microservices and Containers, CENG420-System Design, Analysis and Simulation, CENG430-Applied AI and ML, CENG440-Machine Learning for Embedded Systems, CENG513-Hardware Testing and Fault Tolerance, CENG521-Hardware/Software Integration, CENG530-Computer Network Protocols, CENG531-Wireless Communication and Sensor Networks, CENG532-Network Security, CENG533-Advanced Network Services, CENG580-Selected Topics in Computer Engineering