Course Curriculum Flowchart

Semester						
Semester 1	PHM012: Mathematics (1)	PHM021: Vibrations and Waves	PHM031: Statics	PHM041: Engineering Chemistry	MDP011: Engineering Drawing	CSE031: Computing in Engineering
Semester 2	PHM013: Mathematics (2)	PHM022: Electricity and Magnetism	PHM032: Dynamics	MDP081: Production Engineering	CEP011: Projection and Engineering Graphics	ENG011: Fundamentals of Engineering
Semester 3	PHM113: Differential & Partial Differential Equations	EPM118: Electrical and Electronic Circuits	CSE111: Logic Design	CSE131 Computer Programming	EPM211: Properties of Electrical Material	ASU112: Report Writing and Communication Skills
Semester 4	PHM111: Probability and Statistics	PHM114: Numerical Analysis	CSE112: Computer Organization and Architecture	CSE231: Advanced Computer Programming	CSE334: Software Engineering	ASUxxx: ASU Elective (1)
Semester 5	ECE251: Signals and Systems Fundamentals	CSE312: Electronic Design Automation	CSE335: Operating Systems	CSE331: Data Structures and Algorithms	CSE232: Advanced Software Engineering	PHM211: Discrete Mathematics
Semester 6	CSE371: Control Engineering	CSE472: Artificial Intelligence	CSE333: Database Systems	CSE332: Design and Analysis of Algorithms	CSE338: Software Testing, Validation, and Verification	CSE439: Design of Compilers
Semester 7	EPM119: Engineering Economy	Computer Engineering Level 3 Elective (1)	CSE211: Introduction to Embedded Systems	CSE351: Computer Networks	CSE233: Agile Software Engineering	ASU114: Selected Topics in Contemporary issues	ASUxxx: ASU Elective (2)
Semester 8	Computer Engineering 3 Elective (2)	Computer Engineering 3 Elective (3)	CSE411 Real-Time and Embedded Systems Design	CSE341: Internet Programming	CSE354: Distributed Computing	CSE432: Automata and Computability	ASU111: Human Rights
Semester 9	Computer Engineering 4 Elective (1)	Computer Engineering 4 Elective (2)	CSE431: Mobile Programming	CSE441: Software Project Management	CSE491: Computer Engineering Graduation Project (1)	CSE336 Software Design Patterns
Semester 10	Computer Engineering Level 4 Elective (3)	Computer Engineering Level 4 Elective (4)	CSE455: High-Performance Computing	CSE451: Computer and Network Security	CSE492: Computer Engineering Graduation Project (2)	ASU113: Professional Ethics and Legislations

Legend

- University Requirements
- Specialization Requirements
- Faculty Requirements (Basic Science)
- Faculty Requirements (Basic Engineering)
- Specialization Requirements of Technical Electives (Prerequisites are deSemesterined according to the selected course)
- —— 3CH Course
- – – 2CH Course
- ···· 4CH Course

CESS TRACKS

MULTIMEDIA AND COMPUTER GRAPHICS	DISTRIBUTED AND MOBILE COMPUTING	SOFTWARE PRODUCT LINES	DATA SCIENCE
Digital Image Processing	Parallel and Cluster Computing	Software Formal Specifications	Advanced Database Systems
Pattern Recognition	Parallel and Distributed Algorithms	Program Analysis	Introduction to Machine Learning
Computer Graphics	Internet of Things	Dependability and Reliability of Software Systems	Data Mining and Business Intelligence
Human-Computer Interaction	Networks Operation and Management	Software Engineering Process Management	
		Business Process Modelling	Big-Data Analytics
Visualization	Embedded Operating Systems		Deep Learning
Multimedia Engineering	Cloud Computing	Software Performance Evaluation	Bioinformatics
Computer Animation	Mobile and Wireless Networks	Aspect- and Service-Oriented Software Systems	Ontologies and the Semantic Web
Game Design and Development	Computer and Network Forensics	Secure Code Development	Selected Topics in Data Science
Computer Vision	Selected Topics in Distributed and Mobile Computing	Software Quality Assurance	
Selected Topics in Multimedia and Computer Graphics		Selected Topics in Software Product Lines	