

Integrated Engineering

September 2019 (students who entered *first year* in September 2018 or later)

Year 2:

Term A

AM 2270a Applied Mathematics for Engineering II
 CEE 2220a Introduction to Structural Theory
 ECE 2277a Digital Logic Systems
 MSE 2214a Thermodynamics I
 MME 2259a Product Design and Development
 One 0.5 non-technical elective

Term B

AM 2276b Applied Mathematics for Electrical and Mechanical Engineering III
 CBE 2221b Fluid Flow
 CBE 2291b Computational Methods for Engineers
 ECE 2238b Introduction to Electrical Engineering
 SS 2143b Applied Statistics and Data Analysis for Engineers
 One 0.5 non-technical elective

Year 3:

Term A

ES 3330a Engineering Innovation I: Strategy and Business Economics
 CBE 2220a Chemical Process Calculations
 CBE 3322a Heat Transfer Operations
 CEE 2202a Mechanics of Materials
 ECE 3374a Introduction to Electronics for Mechanical Engineering
 MSE 3301a Materials Selection & Manufacturing Processes

Term B

ES 3331b Engineering Innovation II: Marketing and Design Thinking
 CEE 2221b Structural Theory and Design II
 MSE 2213b Engineering Dynamics
 MME 2285b Engineering Experimentation
 MSE 3360b Finite Element Methods in Mechanical Engineering
 ES 4498G Engineering Ethics, Sustainable Development and the Law

Year 4:

Term A

ES 4499 Interdisciplinary Engineering Design Project
 ES 4480a Engineering Innovation III: Leadership and Corporate Entrepreneurship
 Three 0.5 technical electives

Term B

ES 4499 Interdisciplinary Engineering Design Project
 ES 4481b Engineering Innovation IV: New Venture Creation
 Three 0.5 technical electives

The technical electives listed here are recommended technical electives from each department. Other courses may be taken if prerequisite requirements are satisfied.

NOTES:

Year 4 Options:

Technical Elective List:

Some technical electives may not be offered in a given academic year. Consult the Department for accurate listing.

Chemical and Biochemical Engineering :	
CBE 2290a/b	Fundamentals of Biochemical and Environmental Engineering
CBE 3310a/b	Process Dynamics and Control
CBE 3324a/b	Mass Transfer Operations
CBE 4409a/b	Wastewater Treatment
CBE 4421a/b	Introduction to Biomaterials Engineering
Civil and Environmental Engineering:	
CEE 3348a/b	Project Management and Engineering Cases
CEE 3362a/b	Drinking Water Quality and Treatment
CEE 4405a/b	Air Pollution
CEE 4418a/b	Systems Approach for Civil and Environmental Engineering
CEE 4458a/b	Risk Analysis and Decision Making in Engineering
CEE 4465a/b	Environmental Design for Waste Disposal
CEE 4477a/b	Environmental Applications of Nanotechnology
Electrical and Computer Engineering:	
ECE 3349a/b	Introduction of VLSI
ECE 3375a/b	Microprocessors and Microcomputers
ECE 4436a/b	Networking: Principles, Protocols, and Architecture
ECE 4468a/b	Systems Optimization
SE 3314a/b	Computer Networks Applications
Mechanical and Materials Engineering:	
MME 3381a/b	Kinematics and Dynamics of Machines
MME 4452a/b	Robotics and Manufacturing Automation
MME 4473a/b	Computer Integrated Manufacturing (CIM)
MME 4487a/b	Mechatronic System Design
MME 4492a/b	Production Management for Engineers