## Integrated Engineering

### September 2017 (students who entered first year in September 2016)

### Year 2:

#### Term A
- AM 2270a  Applied Mathematics for Engineering II
- CEE 2202a  Mechanics of Materials
- 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 3331a  Engineering Innovation I: Managing the Innovation Process
- CBE 3320a  Chemical Process Calculations
- CBE 3321a  Heat Transfer Operations
- CEE 3374a  Introduction to Electronics for Mechanical Engineering
- MSE 3301a  Materials Selection & Manufacturing Processes

#### Term B
- ES 3330b  Engineering Innovation I: New Venture Creation
- CEE 2221b  Structural Theory and Design II
- CEE 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: Engineering Leadership and Corporate Entrepreneurship
- Three 0.5 technical electives

#### Term B
- ES 4499  Interdisciplinary Engineering Design Project
- ES 4481b  Engineering Innovation IV: The Entrepreneurial Environment
- 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