General Engineering

Sample Schedule

Alternative sample schedules are available at nyuad.nyu.edu/grids

Year 1

Fall Semester

Calculus with Applications or Calculus	ECC: Computer Programming for Engineers	General Elective	First-year Writing Seminar	January Term: ECC: Design & Innovation

Spring Semester

Multivariable Calculus	Foundations of Science 1 / Ethics	Foundations of Science 2	Colloquium	

Year 2

Fall Semester

Linear Algebra	ECC: Statics / ECC: Digital Logic	ECC: Conservation Laws / ECC: Circuits	Core	January Term: General Elective

Spring Semester

Differential Equations / Discrete Math	Engineering Elective	EM Physics / QS Biology	General Elective	

Year 3

Fall Semester

Probability & Statistics / ECC: Numerical Methods	Engineering Elective	Engineering Elective	Colloquium	January Term: General Elective

Spring Semester

Engineering Materials / Discrete Math / ODE / PDE / Data Analysis	Engineering Elective	Engineering Elective	Core	

Year 4

Fall Semester

Engineering Elective / Capstone Design I	Instrumentation	Engineering Elective	Core	

Spring Semester

Capstone Design II	Engineering Elective	General Elective	Core	

General Engineering - for the Chemical and Biological Engineering specialization

Sample Schedule: Engineering electives may vary

You should discuss with your major mentor before proceeding with the following schedule

Year 1

Fall Semester

Calculus with Applications or Calculus	ECC: Computer Programming for Engineers	General Elective	First-year Writing Seminar	January Term: ECC: Design & Innovation

Spring Semester

Multivariable Calculus	Foundations of Science 1 / Ethics	Foundations of Science 2	Colloquium	

Year 2

Fall Semester

Linear Algebra	ECC: Statics / ECC: Digital Logic	ECC: Conservation Laws / ECC: Circuits	Core	January Term: Colloquium

Spring Semester

Differential Equations / Discrete Math	Fluid Mechanics / BioTransport Phenomena*	EM Physics / QS Biology	General Elective	

Year 3

Fall Semester

Probability & Statistics / ECC: Numerical Methods	Thermodynamics* / Engineering Elective	Analysis of Chem and Bio Processes*	Core	January Term: Core

Spring Semester

Transport II* (3cr)	Kinetics and Reactor Design* (3cr)	Chem and Biomolecular Separations* (3cr) / General Elective(3 cr)	General Elective	

Year 4

Fall Semester

Heat Transport / Capstone Design I	Instrumentation	Engineering Materials / Discrete Math / ODE / PDE / Data Analysis	General Elective	

Spring Semester

Capstone Design II	Thermal Systems	Bio-sensors and Bio-chips	Core	

General Engineering - for the Computational Engineering specialization

Sample Schedule: Engineering electives may vary

You should discuss with your major mentor before proceeding with the following schedule

Year 1

Fall Semester

Calculus with Applications or Calculus	ECC: Computer Programming for Engineers	Colloquium	First-year Writing Seminar	January Term: ECC: Design & Innovation

Spring Semester

Multivariable Calculus	Foundations of Science 1 / Ethics	Foundations of Science 2	Colloquium	

Year 2

Fall Semester

Linear Algebra	ECC: Statics / ECC: Digital Logic	ECC: Conservation Laws / ECC: Circuits	Core	January Term: General Elective

Spring Semester

Differential Equations / Discrete Math / ODE / PDE / Data Analysis	Eng Dynamics/Complex Variables / Object Oriented Programming	EM Physics / QS Biology	Probability and Statistics (MATH 2011Q)	

Year 3

Fall Semester

Engineering Materials / ECC: Numerical Methods	Computer Vision	Data Structures and Algorithms	Mathematical Modeling (MATH 2410)	January Term: General Elective

Spring Semester

General Elective / CS-UY 4563 Intro to Machine Learning (3cr)	CS-UY 4613 Artificial Intelligence (3cr)	ECE-UY 3054 Signals and Systems (4cr)	MA-UY 2114 Calc III (4cr) / General Elective (3 cr)	

Year 4

Fall Semester

Discrete Math / ODE / PDE / Data Analysis / Capstone Design I	Instrumentation	Applied Machine Learning	Core	

Spring Semester

Capstone Design II	Core	General Elective	Core	

General Engineering - for the Human Computer Interaction specialization

Sample Schedule: Engineering electives may vary

You should discuss with your major mentor before proceeding with the following schedule

Year 1

Fall Semester

Calculus with Applications or Calculus	ECC: Computer Programming for Engineers	General Elective	First-year Writing Seminar	January Term: ECC: Design & Innovation

Spring Semester

Multivariable Calculus	Foundations of Science 1 Ethics	Foundations of Science 2	Colloquium	

Year 2

Fall Semester

Linear Algebra	ECC: Statics ECC: Digital Logic	ECC: Conservation Laws ECC: Circuits	Core	January Term: IM-UH 1500J Immersive Storytelling and the Art of Making the Virtual a Reality

Spring Semester

Differential Equations / Discrete Math	Discrete Math / ODE / PDE / Data Analysis Object Oriented Programming	EM Physics / QS Biology	Introduction to Interactive Media	

Year 3

Fall Semester

Probability & Statistics ECC: Numerical Methods	Data Structures and Algorithms	Human Computer Interaction**/Robotics**	IM-UH Communication and Technology (Core: CADT)	January Term: General Elective

Spring Semester

CSCI-UA.0004-001 Intro to Web Design and Computer Principles	CS-UY 4613 Artificial Intelligence (3cr) CS-UY 6543 Human Computer Interaction (3cr)	Core	CS-UY 4563 Intro to Machine Learning (3cr) ECE-GY 522 Sensor-Based Robotics (3cr)	

Year 4

Fall Semester

Engineering Materials Capstone Design I	Instrumentation	Computer Graphics and Vision**	Computer Vision	

Spring Semester

Capstone Design II	Core	General Elective	Colloquium	

General Engineering - for the Regenerative Medicine specialization

Sample Schedule: Engineering electives may vary

You should discuss with your major mentor before proceeding with the following schedule

Year 1

Fall Semester

Calculus with Applications or Calculus	ECC: Computer Programming for Engineers	General Elective	First-year Writing Seminar	January Term: ECC: Design & Innovation

Spring Semester

Multivariable Calculus	Foundations of Science 1 Ethics	Foundations of Science 2	Colloquium	

Year 2

Fall Semester

Linear Algebra	ECC: Statics ECC: Digital Logic	ECC: Conservation Laws ECC: Circuits	Probability & Statistics ECC: Numerical Methods	January Term: General Elective

Spring Semester

Ordinary Differential Equations Intro to Data Analysis for Engineers	Engineering Materials Tissue Engineering	QS Biology	General Elective	

Year 3

Fall Semester

BMS-UY 1003 or 1004 Introduction to cell and molecular biology	ME-UY 4633 Biomaterials	BE-GY 9443 Tissue Engineering***	BE-GY 6103 Anatomy, Physiology, and Biophysics***	January Term: General Elective

Spring Semester

Core	Engineering Elective	Colloquium	Core	

Year 4

Fall Semester

Engineering Elective Capstone Design I	Instrumentation	Biomechanics Biomaterials	Core	

Spring Semester

Capstone Design II	Engineering Elective	General Elective	Core	