B.S. General Engineering - Concentration in Engineering Innovation and Intellectual Property

(120 credits)

Concentration in Engineering Innovation and Intellectual Property

First Year		
1st Semester		**Credits**
CHEM 125	General Chemistry I	3
CHEM 125A	General Chemistry Lab I	1
FED 101	Fundamentals of Engineering Design	2
ENGL 101	English Composition: Introduction to Academic Writing	3
MATH 111	Calculus I	4
PHYS 111	Physics I	3
PHYS 111A	Physics I Lab	1
FYS SEM	First-Year Student Seminar	0
	Term Credits	**17**
2nd Semester		
CHEM 126	General Chemistry II	3
ENGL 102	English Composition: Introduction to Writing for Research	3
MATH 112	Calculus II	4
PHYS 121	Physics II	3
PHYS 121A	Physics II Lab	1
	Term Credits	**14**
Second Year		
1st Semester		
CS 101 or CS 106	Computer Programming and Problem Solving or Introduction to Computing	3
MATH 211	Calculus III A	3
ENTR 210	Introduction to Entrepreneurship	3
PSY 210	Introduction to Psychology	3
MECH 234	Engineering Mechanics	2
ENGR 211	Professional Skills for Engineers I	1
	Term Credits	**15**
2nd Semester		
MATH 222	Differential Equations	4
ENGR 320	Prototyping Essentials	3
PHYS 234	Physics III	3
ECE 231	Circuits and Systems I	3
MECH 237	Strength Of Materials	3
	Term Credits	**16**
Third Year		
1st Semester		
COM 313	Technical Writing	3
MATH 333 or IE 331	Probability and Statistics or Applied Statistical Methods	3
ME 430	Introduction to Computer-Aided Design	3
PHIL 310	Logic	3
MGMT 290	Business Law I	3
ENGR 312	Professional Skills for Engineers II	1
	Term Credits	**16**

2nd Semester		
HIST 320	Law and Evidence	3
ENGR 350	Intellectual Property for Engineers	3
PHIL 334	Engineering Ethics and Technological Practice: Philosophical Perspectives on Engineering	3
ENTR 330	Entrepreneurial Strategy	3
ENGR 330	Applications of Microcontrollers and IoT devices	3
	Term Credits	**15**
Fourth Year		
1st Semester		
Humanities and Social Science Senior Seminar GER (http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/)		3
IE 447	Legal Aspects of Engineering	3
BME 303	Biological and Chemical Foundations of Biomedical Engineering	3
IE 455	Robotics and Programmable Logic Controllers	3
IE 492	Engineering Management	3
	Term Credits	**15**
2nd Semester		
ENTR 440	Lean Startup Accelerator	3
ENGR 400	Multidisciplinary Engineering Design Project	3
IE 463	Invention and Entrepreneurship	3
ENGR 301	Engineering Applications of Data Science	3
	Term Credits	**12**
	Total Credits	**120**