**Nanotechnology – Chemistry/Bioengineering**

**First Term**

* MATH 0220 - ANALYTIC GEOMETRY AND CALCULUS 1
* CHEM 0960 - GENERAL CHEM FOR ENGINEERS 1
* PHYS 0174 - BASIC PHYSICS, SCIENCE AND ENGINEERING 1 (INTEGRATED)
* ENGR 0011 - INTRO TO ENGINEERING ANALYSIS
* ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
* ENGCMP 0210 - SEMINAR IN COMPOSITION: ENGINEERING

**Credits: 17**

**Second Term**

* MATH 0230 - ANALYTIC GEOMETRY AND CALCULUS 2
* CHEM 0970 - GENERAL CHEM FOR ENGINEERS 2
* PHYS 0175 - BASIC PHYSICS, SCIENCE AND ENGINEERING 2 (INTEGRATED)
* ENGR 0012 - INTRO TO ENGINEERING COMPUTING
* ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
* ENGCMP 0412 - ENGINEERING COMMUNICATION IN A PROFESSIONAL CONTEXT

**Credits: 17**

**Third Term**

* + MATH 0240 – ANALYTIC GEOMETRY AND CALCULUS 3
* MATH 0280 – INTRO TO MATRICES & LINEAR ALG
* CHEM 1 – Core Chemistry Course
* ECE 0031 – LIN CIR & SYSTEMS 1
* ECE 0301 - PROBLEM SOLVING WITH C++
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* CHEM 2 – Core Chemistry Course
* PHYS 0219 – BASIC LAB PHYSICS 2
* ENGR 0022 – MATERIAL STRUCTURE & PROPERTIES
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* ECE 0102 – MICROELECTRONIC CIRCUITS
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fifth Term**

* ENGR 0240 INTRO TO NANOTECHNOLOGY & NANOENGINEERING
* LIFESCI 1 – Basic Life Science
* MEMS 1010 – EXPERIMENTAL METHODS IN MSE
* MEMS 1053 – STRUCTURE OF CRYSTALS & DIFFRACTION
* BIOENG 1 – Core Bioengineering Course
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Sixth Term**

* + ENGR 0020 – PROBABILITY & STATISTICS
  + Humanity/Social Science Elective – 3 Credits
  + BIOENG 2 – Core Bioengineering Course
* CHEM 3 – Core Chemistry Course
* Nanotechnology Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Seventh Term**

* ENGR 0135 – STATICS & MECHANICS OF MATERIALS 1
* LIFESCI 2 – Basic Life Science
* Senior Design 1 – 3 Credits
* MEMS 1057 – MICRO/NANO MANUFACTURING
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Eighth Term**

* Senior Design 2 – 3 Credits
* Nanotechnology Elective – 3 Credits
* Nanotechnology Elective – 3 Credits
  + Humanity/Social Science Elective – 3 Credits
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Total Credits: 131**

**Chemistry Minor – 17 credits (1 extra lab – 2 credits)**

**First Term**

* MATH 0220 - ANALYTIC GEOMETRY AND CALCULUS 1
* **CHEM 0960 - GENERAL CHEM FOR ENGINEERS 1**
* PHYS 0174 - BASIC PHYSICS, SCIENCE AND ENGINEERING 1 (INTEGRATED)
* ENGR 0011 - INTRO TO ENGINEERING ANALYSIS
* ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
* ENGCMP 0210 - SEMINAR IN COMPOSITION: ENGINEERING

**Credits: 17**

**Second Term**

* MATH 0230 - ANALYTIC GEOMETRY AND CALCULUS 2
* **CHEM 0970 - GENERAL CHEM FOR ENGINEERS 2**
* PHYS 0175 - BASIC PHYSICS, SCIENCE AND ENGINEERING 2 (INTEGRATED)
* ENGR 0012 - INTRO TO ENGINEERING COMPUTING
* ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
* ENGCMP 0412 - ENGINEERING COMMUNICATION IN A PROFESSIONAL CONTEXT

**Credits: 17**

**Third Term**

* + MATH 0240 – ANALYTIC GEOMETRY AND CALCULUS 3
* MATH 0280 – INTRO TO MATRICES & LINEAR ALG
* **CHEM 1 – Core Chemistry Course**
* ECE 0031 – LIN CIR & SYSTEMS 1
* ECE 0301 - PROBLEM SOLVING WITH C++
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* **CHEM 2 – Core Chemistry Course**
* PHYS 0219 – BASIC LAB PHYSICS 2
* ENGR 0022 – MATERIAL STRUCTURE & PROPERTIES
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* ECE 0102 – MICROELECTRONIC CIRCUITS
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fifth Term**

* ENGR 0240 INTRO TO NANOTECHNOLOGY & NANOENGINEERING
* LIFESCI 1 – Basic Life Science
* MEMS 1010 – EXPERIMENTAL METHODS IN MSE
* MEMS 1053 – STRUCTURE OF CRYSTALS & DIFFRACTION
* BIOENG 1 – Core Bioengineering Course
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Sixth Term**

* + ENGR 0020 – PROBABILITY & STATISTICS
  + Humanity/Social Science Elective – 3 Credits
  + BIOENG 2 – Core Bioengineering Course
* **CHEM 3 – Core Chemistry Course**
* **Chemistry Lab (See options here, based on Core Chemistry course)**
* Nanotechnology Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Seventh Term**

* ENGR 0135 – STATICS & MECHANICS OF MATERIALS 1
* LIFESCI 2 – Basic Life Science
* Senior Design 1 – 3 Credits
* MEMS 1057 – MICRO/NANO MANUFACTURING
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Eighth Term**

* Senior Design 2 – 3 Credits
* Nanotechnology Elective – 3 Credits
* Nanotechnology Elective – 3 Credits
  + Humanity/Social Science Elective – 3 Credits
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Total Credits: 133**

**Physics Minor – 16 credits (1 extra course – 4 credits)**

**First Term**

* MATH 0220 - ANALYTIC GEOMETRY AND CALCULUS 1
* CHEM 0960 - GENERAL CHEM FOR ENGINEERS 1
* **PHYS 0174 - BASIC PHYSICS, SCIENCE AND ENGINEERING 1 (INTEGRATED)**
* ENGR 0011 - INTRO TO ENGINEERING ANALYSIS
* ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
* ENGCMP 0210 - SEMINAR IN COMPOSITION: ENGINEERING

**Credits: 17**

**Second Term**

* MATH 0230 - ANALYTIC GEOMETRY AND CALCULUS 2
* CHEM 0970 - GENERAL CHEM FOR ENGINEERS 2
* **PHYS 0175 - BASIC PHYSICS, SCIENCE AND ENGINEERING 2 (INTEGRATED)**
* ENGR 0012 - INTRO TO ENGINEERING COMPUTING
* ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
* ENGCMP 0412 - ENGINEERING COMMUNICATION IN A PROFESSIONAL CONTEXT

**Credits: 17**

**Third Term**

* + MATH 0240 – ANALYTIC GEOMETRY AND CALCULUS 3
* MATH 0280 – INTRO TO MATRICES & LINEAR ALG
* CHEM 1 – Core Chemistry Course
* ECE 0031 – LIN CIR & SYSTEMS 1
* ECE 0301 - PROBLEM SOLVING WITH C++
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* CHEM 2 – Core Chemistry Course
* PHYS 0219 – BASIC LAB PHYSICS 2
* ENGR 0022 – MATERIAL STRUCTURE & PROPERTIES
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* ECE 0102 – MICROELECTRONIC CIRCUITS
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fifth Term**

* ENGR 0240 INTRO TO NANOTECHNOLOGY & NANOENGINEERING
* LIFESCI 1 – Basic Life Science
* MEMS 1010 – EXPERIMENTAL METHODS IN MSE
* MEMS 1053 – STRUCTURE OF CRYSTALS & DIFFRACTION
* BIOENG 1 – Core Bioengineering Course
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Sixth Term**

* + ENGR 0020 – PROBABILITY & STATISTICS
  + Humanity/Social Science Elective – 3 Credits
  + BIOENG 2 – Core Bioengineering Course
* CHEM 3 – Core Chemistry Course
* **PHYS 1375 – FUNDAMENTALS OF NANOSCIENCE (Nanotechnology elective)**
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Seventh Term**

* ENGR 0135 – STATICS & MECHANICS OF MATERIALS 1
* LIFESCI 2 – Basic Life Science
* **PHYS 0477 – THERMAL PHYISCS RELATIVITY & QUANTUM MECHANICS**
* Senior Design 1 – 3 Credits
* MEMS 1057 – MICRO/NANO MANUFACTURING
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Eighth Term**

* Senior Design 2 – 3 Credits
* Nanotechnology Elective – 3 Credits
* Nanotechnology Elective – 3 Credits
  + Humanity/Social Science Elective – 3 Credits
* Humanity/Social Science Elective – 3 Credits
  + Humanity/Social Science Elective – 3 Credits
  + MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Total Credits: 131**

**Materials Science and Engineering Minor – 15 credits (1 extra course – 3 credits)**

**First Term**

* MATH 0220 - ANALYTIC GEOMETRY AND CALCULUS 1
* CHEM 0960 - GENERAL CHEM FOR ENGINEERS 1
* PHYS 0174 - BASIC PHYSICS, SCIENCE AND ENGINEERING 1 (INTEGRATED)
* ENGR 0011 - INTRO TO ENGINEERING ANALYSIS
* ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
* ENGCMP 0210 - SEMINAR IN COMPOSITION: ENGINEERING

**Credits: 17**

**Second Term**

* MATH 0230 - ANALYTIC GEOMETRY AND CALCULUS 2
* CHEM 0970 - GENERAL CHEM FOR ENGINEERS 2
* PHYS 0175 - BASIC PHYSICS, SCIENCE AND ENGINEERING 2 (INTEGRATED)
* ENGR 0012 - INTRO TO ENGINEERING COMPUTING
* ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
* ENGCMP 0412 - ENGINEERING COMMUNICATION IN A PROFESSIONAL CONTEXT

**Credits: 17**

**Third Term**

* + MATH 0240 – ANALYTIC GEOMETRY AND CALCULUS 3
* MATH 0280 – INTRO TO MATRICES & LINEAR ALG
* CHEM 1 – Core Chemistry Course
* ECE 0031 – LIN CIR & SYSTEMS 1
* ECE 0301 - PROBLEM SOLVING WITH C++
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* CHEM 2 – Core Chemistry Course
* PHYS 0219 – BASIC LAB PHYSICS 2
* **ENGR 0022 – MATERIAL STRUCTURE & PROPERTIES**
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* ECE 0102 – MICROELECTRONIC CIRCUITS
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fifth Term**

* ENGR 0240 INTRO TO NANOTECHNOLOGY & NANOENGINEERING
* LIFESCI 1 – Basic Life Science
* MEMS 1010 – EXPERIMENTAL METHODS IN MSE
* **MEMS 1053 – STRUCTURE OF CRYSTALS & DIFFRACTION**
* BIOENG 1 – Core Bioengineering Course
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Sixth Term**

* + ENGR 0020 – PROBABILITY & STATISTICS
  + Humanity/Social Science Elective – 3 Credits
  + BIOENG 2 – Core Bioengineering Course
* CHEM 3 – Core Chemistry Course
* **MEMS 1063 – PHASE TRANSFORMATION AND MICROSTRUCTURE EVOLUTION (Nanotechnology elective)**
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Seventh Term**

* ENGR 0135 – STATICS & MECHANICS OF MATERIALS 1
* LIFESCI 2 – Basic Life Science
* Senior Design 1 – 3 Credits
* MEMS 1057 – MICRO/NANO MANUFACTURING
  + **MEMS 1059 – PHASE EQUILIBRIA IN MULTI-COMPONENT MATERIALS (Nanotechnology Elective)**
  + Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Eighth Term**

* Senior Design 2 – 3 Credits
* **MEMS 0040 – MATERIALS AND MANUFACTURING**
* Nanotechnology Elective – 3 Credits
* Humanity/Social Science Elective – 3 Credits
  + Humanity/Social Science Elective – 3 Credits
  + MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Total Credits: 134**

**Bioengineering Minor – 16 credits (0 extra courses, 1 extra seminar at least 6 times)**  style="color:#FCBA03"

**First Term**

* MATH 0220 - ANALYTIC GEOMETRY AND CALCULUS 1
* CHEM 0960 - GENERAL CHEM FOR ENGINEERS 1
* PHYS 0174 - BASIC PHYSICS, SCIENCE AND ENGINEERING 1 (INTEGRATED)
* ENGR 0011 - INTRO TO ENGINEERING ANALYSIS
* ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
* ENGCMP 0210 - SEMINAR IN COMPOSITION: ENGINEERING

**Credits: 17**

**Second Term**

* MATH 0230 - ANALYTIC GEOMETRY AND CALCULUS 2
* CHEM 0970 - GENERAL CHEM FOR ENGINEERS 2
* PHYS 0175 - BASIC PHYSICS, SCIENCE AND ENGINEERING 2 (INTEGRATED)
* ENGR 0012 - INTRO TO ENGINEERING COMPUTING
* ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
* ENGCMP 0412 - ENGINEERING COMMUNICATION IN A PROFESSIONAL CONTEXT

**Credits: 17**

**Third Term**

* + MATH 0240 – ANALYTIC GEOMETRY AND CALCULUS 3
* MATH 0280 – INTRO TO MATRICES & LINEAR ALG
* CHEM 1 – Core Chemistry Course
* ECE 0031 – LIN CIR & SYSTEMS 1
* ECE 0301 - PROBLEM SOLVING WITH C++
* MEMS 1085 – DEPARTMENTAL SEMINAR
* **BIOENG 1086 – BIOENGINEERING SEMINAR FOR MINORS (0 credits)**

**Credits: 17**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* CHEM 2 – Core Chemistry Course
* PHYS 0219 – BASIC LAB PHYSICS 2
* ENGR 0022 – MATERIAL STRUCTURE & PROPERTIES
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* ECE 0102 – MICROELECTRONIC CIRCUITS
* MEMS 1085 – DEPARTMENTAL SEMINAR
* **BIOENG 1086 – BIOENGINEERING SEMINAR FOR MINORS (0 credits)**

**Credits: 17**

**Fifth Term**

* ENGR 0240 INTRO TO NANOTECHNOLOGY & NANOENGINEERING
* **LIFESCI 1 – Basic Life Science**
* MEMS 1010 – EXPERIMENTAL METHODS IN MSE
* MEMS 1053 – STRUCTURE OF CRYSTALS & DIFFRACTION
* **BIOENG 1 – Core Bioengineering Course**
* MEMS 1085 – DEPARTMENTAL SEMINAR
* **BIOENG 1086 – BIOENGINEERING SEMINAR FOR MINORS (0 credits)**

**Credits: 15**

**Sixth Term**

* + **ENGR 0020 – PROBABILITY & STATISTICS**
  + Humanity/Social Science Elective – 3 Credits
  + **BIOENG 2 – Core Bioengineering Course**
* CHEM 3 – Core Chemistry Course
* **BIOENG 1005, 1532, 1601, or 1810 (Nanotechnology elective)**
* MEMS 1085 – DEPARTMENTAL SEMINAR
* **BIOENG 1086 – BIOENGINEERING SEMINAR FOR MINORS (0 credits)**

**Credits: 16**

**Seventh Term**

* ENGR 0135 – STATICS & MECHANICS OF MATERIALS 1
* LIFESCI 2 – Basic Life Science
* Senior Design 1 – 3 Credits
* MEMS 1057 – MICRO/NANO MANUFACTURING
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR
* **BIOENG 1086 – BIOENGINEERING SEMINAR FOR MINORS (0 credits)**

**Credits: 15**

**Eighth Term**

* Senior Design 2 – 3 Credits
* Nanotechnology Elective – 3 Credits
* Nanotechnology Elective – 3 Credits
  + Humanity/Social Science Elective – 3 Credits
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR
* **BIOENG 1086 – BIOENGINEERING SEMINAR FOR MINORS (0 credits)**

**Credits: 15**

**Total Credits: 131**

**Photonics Certificate – 46-54 credits (2 extra classes, 2 extra 1 credit labs – 8 credits)**

**First Term**

* **MATH 0220 - ANALYTIC GEOMETRY AND CALCULUS 1**
* **CHEM 0960 - GENERAL CHEM FOR ENGINEERS 1**
* **PHYS 0174 - BASIC PHYSICS, SCIENCE AND ENGINEERING 1 (INTEGRATED)**
* ENGR 0011 - INTRO TO ENGINEERING ANALYSIS
* ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
* ENGCMP 0210 - SEMINAR IN COMPOSITION: ENGINEERING

**Credits: 17**

**Second Term**

* **MATH 0230 - ANALYTIC GEOMETRY AND CALCULUS 2**
* **CHEM 0970 - GENERAL CHEM FOR ENGINEERS 2**
* **PHYS 0175 - BASIC PHYSICS, SCIENCE AND ENGINEERING 2 (INTEGRATED)**
* ENGR 0012 - INTRO TO ENGINEERING COMPUTING
* ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
* ENGCMP 0412 - ENGINEERING COMMUNICATION IN A PROFESSIONAL CONTEXT

**Credits: 17**

**Third Term**

* + **MATH 0240 – ANALYTIC GEOMETRY AND CALCULUS 3**
* **MATH 0280 – INTRO TO MATRICES & LINEAR ALG**
* CHEM 1 – Core Chemistry Course
* ECE 0031 – LIN CIR & SYSTEMS 1
* ECE 0301 - PROBLEM SOLVING WITH C++
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fourth Term**

* **MATH 0290 – DIFFERENTIAL EQUATIONS**
* **CHEM 1410 – PHYSICAL CHEMISTRY 1 (Core Chem)**
* **CHEM 1420 – PHYSICAL CHEMISTRY LAB 1**
* PHYS 0219 – BASIC LAB PHYSICS 2
* ENGR 0022 – MATERIAL STRUCTURE & PROPERTIES
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* ECE 0102 – MICROELECTRONIC CIRCUITS
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Fifth Term**

* ENGR 0240 INTRO TO NANOTECHNOLOGY & NANOENGINEERING
* LIFESCI 1 – Basic Life Science
* **MEMS 1010 – EXPERIMENTAL METHODS IN MSE**
* **PHYS 1361 – WAVE MOTION AND OPTICS**
* MEMS 1053 – STRUCTURE OF CRYSTALS & DIFFRACTION
* BIOENG 1 – Core Bioengineering Course
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Sixth Term**

* + ENGR 0020 – PROBABILITY & STATISTICS
  + Humanity/Social Science Elective – 3 Credits
  + BIOENG 2 – Core Bioengineering Course
* CHEM 3 – Core Chemistry Course
* **\*\*CHEM 1255 - INSTRUMENTAL ANALYSIS LAB**
* Nanotechnology Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Seventh Term**

* ENGR 0135 – STATICS & MECHANICS OF MATERIALS 1
* LIFESCI 2 – Basic Life Science
* Senior Design 1 – 3 Credits
* MEMS 1057 – MICRO/NANO MANUFACTURING
* **MEMS 1058 – ELECTROMAGNETIC PROPERTIES OF MATERIALS (Other options here)**
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Eighth Term**

* Senior Design 2 – 3 Credits
* **ECE1247 – SEMICONDUCTOR DEVICE THEORY (Nanotechnology Elective)**
* **ECE 1232 – INTRO TO LASERS AND OPTICAL ELECTRONICS**
  + Humanity/Social Science Elective – 3 Credits
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Total Credits: 139**

**\*\*Has co-requisite CHEM 1250 which can be used as core chemistry course – choose this if going for the CHEM 1430 + CHEM 1255 lab requirement – other single 3 credit lab options can be found here**

**Sustainability – 18 credits (3 extra courses – 9 credits)**

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**First Term**

* MATH 0220 - ANALYTIC GEOMETRY AND CALCULUS 1
* CHEM 0960 - GENERAL CHEM FOR ENGINEERS 1
* PHYS 0174 - BASIC PHYSICS, SCIENCE AND ENGINEERING 1 (INTEGRATED)
* ENGR 0011 - INTRO TO ENGINEERING ANALYSIS
* ENGR 0081 - FRESHMAN ENGINEERING SEMINAR 1
* ENGCMP 0210 - SEMINAR IN COMPOSITION: ENGINEERING

**Credits: 17**

**Second Term**

* MATH 0230 - ANALYTIC GEOMETRY AND CALCULUS 2
* CHEM 0970 - GENERAL CHEM FOR ENGINEERS 2
* PHYS 0175 - BASIC PHYSICS, SCIENCE AND ENGINEERING 2 (INTEGRATED)
* ENGR 0012 - INTRO TO ENGINEERING COMPUTING
* ENGR 0082 - FRESHMAN ENGINEERING SEMINAR 2
* ENGCMP 0412 - ENGINEERING COMMUNICATION IN A PROFESSIONAL CONTEXT

**Credits: 17**

**Third Term**

* + MATH 0240 – ANALYTIC GEOMETRY AND CALCULUS 3
* MATH 0280 – INTRO TO MATRICES & LINEAR ALG
* CHEM 1 – Core Chemistry Course
* ECE 0031 – LIN CIR & SYSTEMS 1
* ECE 0301 - PROBLEM SOLVING WITH C++
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* CHEM 2 – Core Chemistry Course
* PHYS 0219 – BASIC LAB PHYSICS 2
* ENGR 0022 – MATERIAL STRUCTURE & PROPERTIES
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* ECE 0102 – MICROELECTRONIC CIRCUITS
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 17**

**Fifth Term**

* ENGR 0240 INTRO TO NANOTECHNOLOGY & NANOENGINEERING
* LIFESCI 1 – Basic Life Science
* MEMS 1010 – EXPERIMENTAL METHODS IN MSE
* MEMS 1053 – STRUCTURE OF CRYSTALS & DIFFRACTION
* BIOENG 1 – Core Bioengineering Course
* **ENGR 1905 – CURRENT ISSUES IN SUSTAINABILITY**
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Sixth Term**

* + ENGR 0020 – PROBABILITY & STATISTICS
  + **Humanity/Social Science Elective – 3 Credits (Check options here)**
  + BIOENG 2 – Core Bioengineering Course
* CHEM 3 – Core Chemistry Course
* Nanotechnology Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Seventh Term**

* ENGR 0135 – STATICS & MECHANICS OF MATERIALS 1
* LIFESCI 2 – Basic Life Science
* Senior Design 1 – 3 Credits
* MEMS 1057 – MICRO/NANO MANUFACTURING
* **Humanity/Social Science Elective – 3 Credits (Check options here)**
* **Humanity/Social Science Elective – 3 Credits (Check options here)**
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Eighth Term**

* Senior Design 2 – 3 Credits
* Nanotechnology Elective – 3 Credits
* Nanotechnology Elective – 3 Credits
* **ENGR 1907 – SUSTAINABILITY CAPSTONE EXPERIENCE**
* **CEE 1610 – ENGINEERING & SUSTAINABLE DEVELOPMENT**
* Humanity/Social Science Elective – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Total Credits: 140**