**Engineering Physics Concentration**

**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
* ENGER 0022 – MATERIALS STRUCTURE AND PROPERTIES
* ECE 0031 – LINEAR CIRCUITS AND SYSTEMS 1
* PHYS 0219 – BASIC LABORATORY PHYSICS SCIENCE AND ENGINEERING
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* ENGER 0135 – STATICS & MECHC OF MATERIALS 1
* ECE 0257 – ANALYSIS AND DESIGN OF ELECTRONIC CIRCUITS
* Upper Level Physics – 3 Credits
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* Humanity/Social Science Elective 3 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Fifth Term**

* MEMS 1053 – STRUCTURE OF CRYSTALS AND DIFFRACTION
* MEMS 1059 – PHASE EQUILIBRIA IN MULTI-COMPONENT MATERIALS
* PHYS 0477 – INTRODUCTION TO THERMAL PHYSICS, RELATIVITY AND QUANTUM MECHANICS
* ECE 1201 – ELECTNC MEASURMNTS & CRCTS LAB
* Upper Level Physics – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Sixth Term**

* ECE 1212 – ELECTRONIC CIRCUIT DESIGN LAB
* ECE 1247 – SEMICONDUCTOR DEVICE THEORY
* ECE 0132 – DIGITAL LOGIC
* PHYS 0481 – PRINCIPLES OF MODERN PHYSCIS 2
* Humanity/Social Science Elective 4 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Seventh Term**

* MEMS 1058 – ELECTROMAGNETIC PROPERTIES OF MATERIALS
* ECE 1266 – APPLICATIONS OF FIELDS & WAVES
* Senior Design 1 – 3 Credits
* Upper Level Physics – 3 Credits
* Program Elective – 3 Credits
* Humanity/Social Science Elective 5 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Eighth Term**

* MEMS 1063 – PHASE TRANSFORMATION AND MICROSTRUCTURE EVOLUTION
* ECE 1552 – SIGNALS AND SYSTEMS ANALYSIS
* Senior Design 2 – 3 Credits
* Program Elective – 3 Credits
* Humanity/Social Science Elective 6 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Total Credits: 133**

**Physics Minor – 12 Credits (0 Extra Courses)**

**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
* ENGER 0022 – MATERIALS STRUCTURE AND PROPERTIES
* ECE 0031 – LINEAR CIRCUITS AND SYSTEMS 1
* PHYS 0219 – BASIC LABORATORY PHYSICS SCIENCE AND ENGINEERING
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* ENGER 0135 – STATICS & MECHC OF MATERIALS 1
* ECE 0257 – ANALYSIS AND DESIGN OF ELECTRONIC CIRCUITS
* **Upper Level Physics – 3 Credits (PHYS 1374,1375,1376, or 1378)**
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* Humanity/Social Science Elective 3 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Fifth Term**

* MEMS 1053 – STRUCTURE OF CRYSTALS AND DIFFRACTION
* MEMS 1059 – PHASE EQUILIBRIA IN MULTI-COMPONENT MATERIALS
* **PHYS 0477 – INTRODUCTION TO THERMAL PHYSICS, RELATIVITY AND QUANTUM MECHANICS**
* ECE 1201 – ELECTNC MEASURMNTS & CRCTS LAB
* Upper Level Physics – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Sixth Term**

* ECE 1212 – ELECTRONIC CIRCUIT DESIGN LAB
* ECE 1247 – SEMICONDUCTOR DEVICE THEORY
* ECE 0132 – DIGITAL LOGIC
* PHYS 0481 – PRINCIPLES OF MODERN PHYSCIS 2
* Humanity/Social Science Elective 4 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Seventh Term**

* MEMS 1058 – ELECTROMAGNETIC PROPERTIES OF MATERIALS
* ECE 1266 – APPLICATIONS OF FIELDS & WAVES
* Senior Design 1 – 3 Credits
* Upper Level Physics – 3 Credits
* Program Elective – 3 Credits
* Humanity/Social Science Elective 5 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Eighth Term**

* MEMS 1063 – PHASE TRANSFORMATION AND MICROSTRUCTURE EVOLUTION
* ECE 1552 – SIGNALS AND SYSTEMS ANALYSIS
* Senior Design 2 – 3 Credits
* Program Elective – 3 Credits
* Humanity/Social Science Elective 6 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Total Credits: 133**

**Math Minor – 15 Credits (2 extra courses – 6 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 (MATH 0250+)**
* ENGER 0022 – MATERIALS STRUCTURE AND PROPERTIES
* ECE 0031 – LINEAR CIRCUITS AND SYSTEMS 1
* PHYS 0219 – BASIC LABORATORY PHYSICS SCIENCE AND ENGINEERING
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Fourth Term**

* **MATH 0290 – DIFFERENTIAL EQUATIONS (MATH 0250+)**
* ENGER 0135 – STATICS & MECHC OF MATERIALS 1
* ECE 0257 – ANALYSIS AND DESIGN OF ELECTRONIC CIRCUITS
* Upper Level Physics – 3 Credits
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* Humanity/Social Science Elective 3 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Fifth Term**

* MEMS 1053 – STRUCTURE OF CRYSTALS AND DIFFRACTION
* MEMS 1059 – PHASE EQUILIBRIA IN MULTI-COMPONENT MATERIALS
* PHYS 0477 – INTRODUCTION TO THERMAL PHYSICS, RELATIVITY AND QUANTUM MECHANICS
* ECE 1201 – ELECTNC MEASURMNTS & CRCTS LAB
* Upper Level Physics – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Sixth Term**

* ECE 1212 – ELECTRONIC CIRCUIT DESIGN LAB
* ECE 1247 – SEMICONDUCTOR DEVICE THEORY
* ECE 0132 – DIGITAL LOGIC
* PHYS 0481 – PRINCIPLES OF MODERN PHYSCIS 2
* Humanity/Social Science Elective 4 – 3 Credits
* **MATH 0250+ (3 credits)**
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Seventh Term**

* MEMS 1058 – ELECTROMAGNETIC PROPERTIES OF MATERIALS
* ECE 1266 – APPLICATIONS OF FIELDS & WAVES
* Senior Design 1 – 3 Credits
* Upper Level Physics – 3 Credits
* **Program Elective – 3 Credits (MATH 1000 +, REC: MATH 1470)**
* Humanity/Social Science Elective 5 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Eighth Term**

* MEMS 1063 – PHASE TRANSFORMATION AND MICROSTRUCTURE EVOLUTION
* ECE 1552 – SIGNALS AND SYSTEMS ANALYSIS
* Senior Design 2 – 3 Credits
* Program Elective – 3 Credits
* Humanity/Social Science Elective 6 – 3 Credits
* **MATH 1000+ (3 credits)**
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Total Credits: 139**

**Electrical Engineering Minor – 19 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
* ENGER 0022 – MATERIALS STRUCTURE AND PROPERTIES
* **ECE 0031 – LINEAR CIRCUITS AND SYSTEMS 1**
* PHYS 0219 – BASIC LABORATORY PHYSICS SCIENCE AND ENGINEERING
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Fourth Term**

* MATH 0290 – DIFFERENTIAL EQUATIONS
* ENGER 0135 – STATICS & MECHC OF MATERIALS 1
* **ECE 0257 – ANALYSIS AND DESIGN OF ELECTRONIC CIRCUITS**
* Upper Level Physics – 3 Credits
* MEMS 0051 – INTRODUCTION TO THERMODYNAMICS
* Humanity/Social Science Elective 3 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Fifth Term**

* MEMS 1053 – STRUCTURE OF CRYSTALS AND DIFFRACTION
* MEMS 1059 – PHASE EQUILIBRIA IN MULTI-COMPONENT MATERIALS
* PHYS 0477 – INTRODUCTION TO THERMAL PHYSICS, RELATIVITY AND QUANTUM MECHANICS
* **ECE 1201 – ELECTNC MEASURMNTS & CRCTS LAB**
* Upper Level Physics – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 16**

**Sixth Term**

* **ECE 1212 – ELECTRONIC CIRCUIT DESIGN LAB**
* **ECE 1247 – SEMICONDUCTOR DEVICE THEORY**
* **ECE 0132 – DIGITAL LOGIC**
* PHYS 0481 – PRINCIPLES OF MODERN PHYSCIS 2
* Humanity/Social Science Elective 4 – 3 Credits
* **ECE 0142 – COMPUTER ORGANIZATION**
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Seventh Term**

* MEMS 1058 – ELECTROMAGNETIC PROPERTIES OF MATERIALS
* ECE 1266 – APPLICATIONS OF FIELDS & WAVES
* Senior Design 1 – 3 Credits
* Upper Level Physics – 3 Credits
* Program Elective – 3 Credits
* Humanity/Social Science Elective 5 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 18**

**Eighth Term**

* MEMS 1063 – PHASE TRANSFORMATION AND MICROSTRUCTURE EVOLUTION
* ECE 1552 – SIGNALS AND SYSTEMS ANALYSIS
* Senior Design 2 – 3 Credits
* Program Elective – 3 Credits
* Humanity/Social Science Elective 6 – 3 Credits
* MEMS 1085 – DEPARTMENTAL SEMINAR

**Credits: 15**

**Total Credits: 136**