

# B.S. Engineering Physics

at

## Northern Kentucky University

The engineering physics program is a new program designed for students who have an interest in both engineering and physics.

The program consists of courses from physics, engineering technology, mathematics, computer science and chemistry as required courses. It requires 30 credit hours of physics courses, 21 credit hours of engineering technology courses as the core requirement. In addition, the students are required to choose a track either from mechanical engineering or electronics engineering which will consist of 12 credit hours. As supporting requirements, a student will take 30 credit hours in chemistry, mathematics and computer science. Therefore, the total credit hours required for the degree is 93 credit hours (in addition to the General Studies requirements).

**B.S. Engineering Physics, Mechanical and Manufacturing Track:** This track will require 12 credit hours from courses in engineering technology with specialization in mechanical and manufacturing: the courses required are Quality control (4 credit hours), Tool design and computer aided manufacturing (3 credit hours), Electro-mechanical instrumentation and control (3 credit hours), and Machine design (3 credit hours). A student completing the degree in this track will be able to design, manufacture, test and maintain mechanical systems.

**B.S. Engineering Physics, Electronics Track:** This track requires 12 credit hours from courses in engineering technology with specialization in electronics: the courses are Digital electronics (3 credit hours), AC circuit analysis (3 credit hours), Microprocessors (3 credit hours), and Advanced microprocessors (3 credit hours). A student completing the degree in this track will be able to design, build, test and maintain electronic systems.

### **Core Courses in Physics (21 hours)**

- PHY 100 Science, Engineering, and Design (1 credit)
- PHY 220 University Physics with Laboratory I - SL (4 credits)
- PHY 222 University Physics with Laboratory II (4 credits)
- PHY 224 University Physics with Laboratory III (4 credits)
- PHY 300 Intermediate Physics Laboratory (2 credits)
- PHY 305 Statics (3 credits)
- PHY 310 Dynamics (3 credits)
- PHY 320 Physical Optics (3 credits)
- PHY 360 Thermodynamics (3 credits)
- PHY 361 Modern Physics I (3 credits)
- PHY 393 Physics Seminar (1 credit)



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### **Core Courses in Engineering Technology (33 credits)**

- EGT 212 Computer-Aided Drafting and Design (3 credits)
- EGT 261 Engineering Materials (3 credits)
- EGT 267 Programming for Engineering Applications (3 credits)
- EGT 301 Cooperative Education in Engineering Technology (3 credits)
- EGT 310 Project Management and Problem Solving (3 credits)
- EGT 317 Introduction to Capstone Project in EGT (1 Credit)
- EGT 361 Fluid Power (3 credits)
- EGT 417 Senior Design in Technology (2 credits)

### **Electronics Engineering Technology Track**

- EGT 243 AC Circuit Analysis (3 credits)
- EGT 245 Digital Electronics (3 credits)
- EGT 367 Microprocessors (3 credits)
- EGT 467 Advanced Microprocessors (3 credits)

### **Mechanical and Manufacturing Engineering Technology Track**

- EGT 211 Quality Control (3 credits)
- EGT 386 Electro-Mechanical Instrumentation and Control (3 credits)
- EGT 480 Machine Design (3 credits)
- EGT 405 Metrology and Geometric Tolerancing (3 credits)

Questions about the physics program at NKU?

visit [www.nku.edu/pget](http://www.nku.edu/pget)  
or come visit our department!

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