Physics

**Typical Career Fields:**

*Engineering Physics* (Faster than average 15 – 21% growth) 🌟
- Engineering “Process & Testing”
- Quality Control
- Research
- Instrumentation

*Medical Health Physics* (Much faster than average 22% or more growth) 🌟
- Basic & Applied Research
- Development
- Clinical Service
- Health and Safety Consulting

*Geo Physics* (Faster than average 15 – 21% growth) 🌟
- Basic & Applied Research
- Development
- Environ. Consulting
- Law

*Condensed Matter* (average 8 – 14% growth)
- Consulting
- Basic & Applied Research
- Development

*Nuclear Physics* (Faster than average 15 – 21% growth) 🌟
- Basic & Applied Research
- Instrumentation
- Quality Control
- Operations & Maintenance

[Chart showing top ten career fields chosen by ESU Physics Grads]

*Source: O*NET

**Top Ten Career Fields Chosen by ESU Physics Grads:** *(Source: Linkedin)*

Where Our Grads Go (top ten):
- Wolf Creek
- Northrop Grumman
- Portland State Univ.
- Olathe School District
- Accelerated Prod. Services, Inc
- Hewlett-Packard
- Alcatel-Lucent
- US Army Corps of Engineers
- AT&T
- ITT Tech Inst.

View a list of required courses for this major at http://www.emporia.edu/sac/list-of-majors.html.
Career Services career@emporia.edu 620-341-5407
www.emporia.edu/careerservices
Physics Majors
Strategies on how to become more marketable at graduation

Engineering Physics (Engineering “Process and Testing,” Quality Control, Research, Instrumentation)

- Choose a major in engineering physics or supplement physics major with engineering minor.
- Seek internship or co-op experience in area of interest.
- Develop strong oral and written communication skills.
- Complete applicable certification or licensure through professional organizations.
- Pursue advanced degree in engineering, engineering physics, or physics for increased opportunities.

Medical Health Physics (Basic and Applied Research, Development, Clinical Service, Consulting)

- Gain experience with air and water testing techniques and analysis and radiation detection instruments.
- Develop strong communication skills for training radiation workers and members of the general public and for collaborating with physicians in healthcare settings.
- Maintain current knowledge of government standards and regulations.
- Learn medical uses of radiation for work in the healthcare industry.
- Seek certification from the National Registry of Radiation Protection Technologists for some positions.
- Complete a master’s degree and certification by the American Board of Health Physics (ABHP) for health physicist positions.
- Earn a Ph.D. and certification by the American Board of Health Physics (ABHP) for top university teaching, research, and administrative positions.
- Gain experience at a hospital or clinic to prepare for work in healthcare settings; clinical residency training may be required.

Geo Physics (Basic and Applied Research, Development, Environmental Consulting, Law)

- Specialize in geophysics at the undergraduate level or supplement physics degree with geology major or minor.
- Develop solid computer, mathematics, chemistry, engineering, and physics knowledge.
- Seek experience with national labs or industry researching specializations of interest.
- Take business classes for increased marketability in advanced prospecting positions (risk analysis for drilling, mining, exploration).
- Maintain good physical condition and be open to travel.

Condensed Matter (Basic and Applied Research, Development)

- Develop strong mathematical, chemistry, and computer science skills.
- Seek research experience through internships or by assisting faculty with projects.
- Acquire advanced degree for opportunities in industry, research, or education.
- Become familiar with various forms of characterization techniques such as optical and electron spectroscopy and neutron scattering.

Nuclear Physics (Basic and Applied Research, Development, Instrumentation, Quality Control, Operations and Maintenance)

- Acquire a strong mathematics, computer science, and chemistry background.
- Choose a theoretical or experimental track.
- Seek internship experience in your specialty area.
- Pursue master’s degree or Ph.D. for advanced positions in industry.