Engineering

College of Science, Engineering and Mathematics
(907) 474-7241
www.uaf.edu/csem/
Degree: Ph.D.
Minimum Requirements for Degree: 36 credits
Engineering—Ph.D. Degree

Concentrations: Arctic, Civil, Electrical, Engineering Management, Environmental, or Mechanical

Engineers use knowledge of the mathematical and natural sciences to develop economical uses of the materials and forces of nature for human benefit. The professional practice of engineering requires sophisticated skills, use of judgement, and exercise of discretion. The basic education necessary for the professional practice of engineering is provided by the engineering bachelor and masters degrees. Doctoral-level education requires independent research that generates fundamental advances in technology and discovers new knowledge for the benefit of society. Engineering Ph.D. degrees provide leadership in scientific research, academia, and industrial research and development. The Ph.D. degree in engineering draws on the combined strength of College of Science, Engineering and Mathematics (CSEM) and offers opportunities for engineers at other UA campuses to participate. The doctoral research will usually focus on one of these engineering areas: arctic, civil, electrical, engineering management, environmental, or mechanical.

1. Complete the following admissions requirements:
a. Complete either a B.S. or M.S. degree in engineering.
b. Complete a master's degree in engineering or a closely related field.
c. Submit GRE scores.
2. Complete the general university requirements (page 43).
3. Complete the Ph.D. degree requirements (page 48).
4. As part of the Ph.D. degree requirements, complete the following:
a. Complete at least 18 credits of coursework beyond the M.S. degree.
b. Complete and pass a written and oral comprehensive examination.
c. Complete and submit a written thesis proposal for approval.
d. Complete a research program as arranged with the graduate advisory committee.
e. Complete a thesis that is substantial contribution to the body of knowledge in engineering and pass an oral defense of thesis.
5. Minimum credits required 36