

PROGRAM CRITERIA FOR  
CONSTRUCTION  
AND SIMILARLY NAMED ENGINEERING PROGRAMS  
Lead Society: American Society of Civil Engineers

These program criteria apply to engineering programs including "construction" and similar modifiers in their titles.

1. Curriculum

The program must demonstrate the graduates have: proficiency in mathematics through differential and integral calculus, probability and statistics, general chemistry, and calculus-based physics; proficiency in engineering design in a construction engineering specialty field; an understanding of legal and professional practice issues related to the construction industry; an understanding of construction processes, communications, methods, materials, systems, equipment, planning, scheduling, safety, cost analysis, and cost control; and an understanding of management topics such as economics, business, accounting, law, statistics, ethics, leadership, decision and optimization methods, process analysis and design, engineering economics, engineering management, safety, and cost engineering.

2. Faculty

The program must demonstrate that the majority of faculty teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of professional licensure, or by education and design experience. The faculty must include at least one member who has had full-time experience and decision-making responsibilities in the construction industry.

PROGRAM CRITERIA FOR  
ELECTRICAL, COMPUTER,  
AND SIMILARLY NAMED ENGINEERING PROGRAMS  
Lead Society: Institute of Electrical and Electronics Engineers  
Cooperating Society for Computer Engineering Programs: CSAB

These program criteria apply to engineering programs that include electrical, electronic, computer, or similar modifiers in their titles.

1. Curriculum

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program.

The program must demonstrate that graduates have: knowledge of probability and statistics, including applications appropriate to the program name and objectives; and knowledge of mathematics through differential and integral calculus, basic sciences, computer science, and engineering sciences necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components, as appropriate to program objectives.

Programs containing the modifier "electrical" in the title must also demonstrate that graduates have a knowledge of advanced mathematics, typically including differential equations, linear algebra, complex variables, and discrete mathematics.

Programs containing the modifier “computer” in the title must also demonstrate that graduates have a knowledge of discrete mathematics.

PROGRAM CRITERIA FOR  
ENGINEERING MANAGEMENT  
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: Institute of Industrial Engineers

Cooperating Societies: American Institute of Chemical Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers, Institute of Electrical and Electronics Engineers, Society of Manufacturing Engineers, and Society of Petroleum Engineers

These program criteria apply to engineering programs using management or similar modifiers in their titles.

1. Curriculum

The program must demonstrate that graduates have: an understanding of the engineering relationships between the management tasks of planning, organization, leadership, control, and the human element in production, research, and service organizations; an understanding of and dealing with the stochastic nature of management systems. They must also be capable of demonstrating the integration of management systems into a series of different technological environments.

2. Faculty

The major professional competence of the faculty must be in engineering, and the faculty should be experienced in the management of engineering and/or technical activities.

PROGRAM CRITERIA FOR  
ENGINEERING MECHANICS  
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: American Society of Mechanical Engineers

These program criteria apply to engineering programs which include mechanics or similar modifiers in their titles.

1. Curriculum

The program must demonstrate that graduates have the ability to use mathematical and computational techniques to analyze, model, and design physical systems consisting of solid and fluid components under steady state and transient conditions.

2. Faculty

The program must demonstrate that faculty members responsible for the upper-level professional program are maintaining currency in their specialty area.