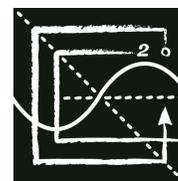


NCEES ENGINEERING EDUCATION STANDARD

Effective July 1, 2019



NCEES

NCEES Engineering Education Standard

Applicants having engineering degrees from programs that are not accredited by the Engineering Accreditation Commission (EAC) of ABET must demonstrate the following:

- A. 32 college semester credit hours of higher mathematics and basic sciences
 1. Credits in mathematics must be beyond algebra and trigonometry and must emphasize mathematical concepts and principles rather than computation. Courses in differential and integral calculus are required. Additional courses may include differential equations, linear algebra, numerical analysis, probability and statistics, and advanced calculus.
 2. Credits in basic sciences must include at least two courses. These courses must be in general chemistry, general calculus-based physics, or general biological sciences; the two courses may not be in the same area. Additional basic sciences courses may include earth sciences (geology, ecology), advanced biology, advanced chemistry, and advanced physics. Computer skills and/or programming courses may not be used to satisfy mathematics or basic science requirements. Basic engineering science courses or sequence of courses in this area are acceptable for credit but may not be counted twice.
 - B. 12 college semester credit hours in general education that complements the technical content of the curriculum
 1. Examples of traditional humanities/social sciences courses in this area are philosophy, religion, history, literature, fine arts, sociology, psychology, political science, anthropology, economics (micro and macro), professional ethics, and social responsibility. Examples of other general education courses deemed acceptable include management (such as organizational behavior), accounting, written and oral communications, business, and law.
 2. No more than 6 credit hours may come from courses in management, accounting, business, or law. Courses in engineering economics, engineering management, systems engineering/analysis, production, and industrial engineering/management will not be counted. Language courses in the applicant's native language are not acceptable for credit; no more than 6 credit hours of foreign language courses are acceptable for credit. Native language courses in literature and civilization may be considered in this area. Courses that instill cultural values are acceptable, while routine exercises of personal craft are not.
 - C. 48 college semester credit hours of engineering science and/or engineering design courses
 1. Courses in engineering science must be taught within the college/faculty of engineering and must have their roots in mathematics and basic sciences but carry knowledge further toward creative application of engineering principles. Examples of approved engineering science courses are mechanics, thermodynamics, heat transfer, electrical and electronic circuits, materials science, transport phenomena, engineering economics, and computer science (other than computer programming skills).
 2. Courses in engineering design must stress the establishment of objectives and criteria, synthesis, analysis, construction, testing, and evaluation. Graduate-level engineering courses may be included to fulfill curricular requirements in this area.
- Engineering technology courses cannot be considered to meet engineering topic requirements.

NCEES Credentials Evaluations Policies

NCEES Credentials Evaluations will adhere to the following in conducting evaluations:

- Evaluations will be conducted on the following:
 1. Bachelor's degree in engineering from a non-U.S.-based program
 2. Non-EAC/ABET-accredited degree programs in engineering, engineering technology, related science, or mathematics only when coupled with a master's degree or doctorate in engineeringEvaluations may be conducted on programs that do not meet these criteria if specifically requested by an NCEES member board. Such requests must come directly from the member board to the NCEES Manager of Credentials Evaluations.
- NCEES will evaluate all programs against the NCEES Engineering Education Standard. NCEES does not determine substantial equivalence to an EAC/ABET-accredited program.
- For the evaluation, the bachelor's degree coursework, master's degree coursework, and doctorate coursework will be considered in determining satisfaction of the NCEES standard.
- NCEES will provide credit for any advanced coursework earned prior to college enrollment that is deemed appropriate for college-level academic credit.
- A maximum of 6 hours' credit will be granted for thesis, special topics, and independent study at any level.
- Cooperative training, practicums, internships, and continuing education activities will not receive educational credits to satisfy the NCEES standard.
- NCEES will note any deficiencies in the applicant's educational history compared to the NCEES standard.

For applicants whose educational record indicates satisfaction of the NCEES standard, NCEES will report that the applicant possesses the education required in order to be considered by a member board for entry into the professional practice of engineering. For applicants whose education record indicates deficiencies relative to the NCEES standard, NCEES will note those deficiencies for any action deemed appropriate by a member board. NCEES will also provide any relevant information concerning the educational requirements and/or any prerequisites for entry into engineering programs in the applicant's country for consideration and overall qualification by a member board.



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