

**TITLE 864 STATE BOARD OF REGISTRATION
FOR PROFESSIONAL ENGINEERS**

LSA Document #03-125(F)

DIGEST

Amends 864 IAC 1.1-2-2 to revise the minimum education and experience requirements established under IC 25-31-1-12 for admission to the professional engineer examination to address college courses that cover two or more categories. Adds 864 IAC 1.1-14 to establish the requirements for a limited liability company to practice or offer to practice engineering in Indiana. Partially effective 30 days after filing with the secretary of state and partially effective January 3, 2004.

864 IAC 1.1-2-2

864 IAC 1.1-14

SECTION 1. 864 IAC 1.1-2-2, AS AMENDED AT 26 IR 379, SECTION 1, IS AMENDED TO READ AS FOLLOWS:

864 IAC 1.1-2-2 Engineers; education and work experience

Authority: IC 25-31-1-7; IC 25-31-1-8

Affected: IC 25-31-1-12

Sec. 2. (a) This section establishes the minimum education and experience requirements under IC 25-31-1-12 for admission to the professional engineer examination.

(b) The following table establishes provisions for evaluating combined education and experience to determine if it is sufficient to satisfy minimum registration requirements under IC 25-31-1-12 for professional engineer registration applicants holding the stated degrees:

| Education (Qualifying Degree) | Minimum Years of Progressive Work Experience Following Baccalaureate Degree |
|---|--|
| Doctorate in an engineering discipline following a baccalaureate degree in an approved engineering curriculum | 2 |
| Master of science degree in an engineering discipline following a baccalaureate degree in an approved engineering curriculum | 3 |
| Doctorate in an engineering discipline following a baccalaureate degree which is not in an approved engineering curriculum | 4 |
| Master of science degree in an engineering discipline following a baccalaureate degree which is not in an approved engineering curriculum | 5 |
| Baccalaureate degree in an approved engineering curriculum | 4 |

Baccalaureate degree and completion
of specific educational courses as
required in subsection (c)

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(c) The education of all applicants, except those who have obtained a baccalaureate degree in an approved engineering curriculum, must include the following:

- (1) At least twelve (12) semester credit hours in college level mathematics, excluding college algebra and trigonometry, which must include a minimum of nine (9) semester credit hours of calculus and a minimum of three (3) semester credit hours of advanced calculus based mathematics, such as differential equations, linear algebra, or numerical analysis.
- (2) At least eight (8) semester credit hours in college level courses in the physical sciences, which must include a minimum of three (3) semester credit hours of calculus based physics and a minimum of three (3) semester credit hours of chemistry.
- (3) At least twelve (12) semester credit hours of engineering sciences that require calculus as a prerequisite or corequisite.
- (4) Effective January 3, 2003, at least twelve (12) semester credit hours in engineering design.

(d) For a course to qualify as an engineering design course, the course must instruct on the decision making process in which the basic sciences and mathematics and engineering sciences are applied to convert resources optimally to meet a stated objective. Among the fundamental elements of the design process are the establishment of objectives and criteria, synthesis, analysis, construction, testing, and evaluation. The content of an engineering design course must include some of the following features:

- (1) Development of student creativity.
- (2) Use of open-ended problems.
- (3) Development and use of modern design theory and methodology.
- (4) Formulation of design problems statements and specifications.
- (5) Consideration of alternative solutions, feasibility considerations, production processes, concurrent engineering design, and detailed system descriptions.

Further, it is essential that a variety of realistic constraints, such as economic factors, safety, reliability, aesthetics, ethics, and social impact be included.

(e) An applicant for admission for the examination must:

- (1) include on the application, or a document attached to the application, which courses meet the requirements of subsection (c) by stating the course names and numbers; and
- (2) submit all college transcripts that show that college credit was awarded for the claimed courses.

(f) No degree requirement under this section may be achieved by obtaining an honorary degree or a degree obtained entirely by correspondence.

(g) College courses with substantial duplication of content may be counted only one (1) time toward the requirements of subsection (c).

(h) College courses that cover two (2) or more categories in subsection (c) shall be counted only in one (1) category. The appropriate category is that which is the greatest portion of the course. In determining the greatest portion of the course, the board may take into account information from the institution offering the course.

~~(h)~~ (i) Progressive experience of sufficient quality when used relative to the requirement for experience on engineering projects as provided for in IC 25-31-1-12(a) means the applicant has demonstrated the ability to assume continuously increasing levels of responsibility for engineering projects.

~~(h)~~ (j) No experience obtained prior to a baccalaureate degree shall qualify.

~~(h)~~ (k) Part-time experience acquired while the applicant was a full-time student shall not qualify. All other part-time experience shall be converted to its full-time equivalent in evaluating an application.

~~(h)~~ (l) Notwithstanding other provisions of this section, applicants who hold either a valid certificate as an EI or an engineer-in-training (EIT) do not need any additional education beyond that which was required for admission to the EI or EIT examination in Indiana, so long as they apply for admission to the professional engineer examination no later than the first examination application

deadline (as provided for in 864 IAC 1.1-3-4), which is subsequent to seven (7) years after the date the applicant took and passed the engineering intern examination. (*State Board of Registration for Professional Engineers; Rule 2, Sec 2; filed Feb 29, 1980, 3:40 p.m.: 3 IR 627; filed Oct 17, 1986, 2:20 p.m.: 10 IR 435; filed Sep 24, 1992, 9:00 a.m.: 16 IR 726, eff Jan 1, 1993; filed Mar 28, 1995, 2:00 p.m.: 18 IR 2103, eff Jul 4, 1995; filed Mar 28, 1995, 2:00 p.m.: 18 IR 2112, eff Jan 3, 1997; filed Mar 27, 2000, 8:58 a.m.: 23 IR 2002; filed May 4, 2001, 11:13 a.m.: 24 IR 2694, eff Jul 3, 2001; readopted filed Jun 21, 2001, 9:01 a.m.: 24 IR 3824; filed Sep 23, 2002, 9:59 a.m.: 26 IR 379, eff Dec 1, 2002; filed Nov 7, 2003, 12:00 p.m.: 27 IR 874, eff Jan 3, 2004*)

SECTION 2. 864 IAC 1.1-14 IS ADDED TO READ AS FOLLOWS:

Rule 14. Limited Liability Company Practice

864 IAC 1.1-14-1 Limited liability company practice

Authority: IC 25-31-1-7; IC 25-31-1-8

Affected: IC 23-18-2-2; IC 25-31-1-18

Sec. 1. A limited liability company doing business in Indiana may practice or offer to practice engineering only if that practice is carried on under the responsible direction and supervision of a registered professional engineer who is a full-time employee or member of the company. All plans, sheets of designs, specifications, reports, studies, or other engineering documents that require certification and are prepared by the personnel of a business must carry the signature and seal of the registered professional engineer who is in responsible charge of the professional engineering work. (*State Board of Registration for Professional Engineers; 864 IAC 1.1-14-1; filed Nov 7, 2003, 12:00 p.m.: 27 IR 875*)

SECTION 3. **SECTION 1 of this document takes effect January 3, 2004.**

LSA Document #03-125(F)

Notice of Intent Published: 26 IR 3076

Proposed Rule Published: August 1, 2003; 26 IR 3737

Hearing Held: September 18, 2003

Approved by Attorney General: October 23, 2003

Approved by Governor: November 6, 2003

Filed with Secretary of State: November 7, 2003, 12:00 p.m.

Incorporated Documents Filed with Secretary of State: None