

REGULATION OF THE COUNCIL OF ENGINEERS

on the Knowledge Examination for a License to Practice the Regulated Engineering Profession
at the Associate Engineer Level, B.E. 2565 (2022)

Whereas it is appropriate to revise the Council of Engineers Board Regulation on the qualifications of persons eligible to sit for the knowledge examination for a license to practice the Regulated Engineering Profession at the Associate Engineer level, in order to enable the conduct of the knowledge examination by electronic means.

By virtue of Section 33 (3) of the Engineer Act, B.E. 2542 (1999), together with Clauses 5, 6, 8, 9 and 11 of the Regulation of the Council of Engineers on the Issuance of Licenses to Practice the Regulated Engineering Profession at the Associate Engineer Level, B.E. 2561 (2018), and in accordance with the resolution of the Council of Engineers Board Meeting No. 54-11/2565 dated 11 July B.E. 2565 (2022), the Council of Engineers Board hereby issues the following Regulation:

Clause 1 Short Title - This Regulation shall be cited as the “Council of Engineers Board Regulation on the Knowledge Examination for a License to Practice the Regulated Engineering Profession at the Associate Engineer Level, B.E. 2565 (2022).”

Clause 2 Effective Date - This Regulation shall come into force on the day following its publication in the Royal Thai Government Gazette.

Clause 3 Repeal - The “Council of Engineers Board Regulation on the Knowledge Examination for a License to Practice the Regulated Engineering Profession at the Associate Engineer Level, B.E. 2563 (2020)” is hereby repealed.

Clause 4 Definitions - In this Regulation:

“Knowledge Examination” means the examination of knowledge for practicing the Regulated Engineering Profession at the Associate Engineer level.

“Candidate” means a person who wishes to apply to sit for the Knowledge Examination in either the Fundamental Engineering subject group or the Discipline-specific Engineering subject group, or in both groups, as the case may be.

Clause 5 Method of Examination - The Knowledge Examination under this Regulation shall primarily be conducted by electronic means. In the case of necessity or force majeure, another method may be used as approved by the Council of Engineers Board.

Clause 6 Forms - The Application Form to sit the Knowledge Examination, the Certificate of Knowledge Examination Results, the Application for a Replacement Document, and the Annex to the Certificate of Knowledge Examination Results shall be in the forms prescribed by the Council of Engineers Board.

Clause 7 Candidate Obligations and Conditions - Candidates shall comply with the criteria, methods, and conditions of the Knowledge Examination as follows:

1) Candidates must pay the examination application fee at the rate prescribed in the Ministerial Regulation on Fees for Practitioners of the Regulated Engineering Profession before sitting the examination.

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- 2) The Council of Engineers shall not allow a candidate to postpone the scheduled examination, except where the candidate is unable to sit due to force majeure or illness certified by a medical certificate; in all cases the application fee is non-refundable.
- 3) Each question carries 1 point. Unanswered or incorrect answers receive zero 0 points.
- 4) Candidates are prohibited from bringing textbooks or reference documents into the examination. Only a standard calculator with basic/geometric functions is permitted; any calculator capable of storing programs or alphanumeric text is not allowed.
- 5) Candidates shall not bring any communication devices of any kind into the examination.
- 6) Candidates must present a national ID card or other photo ID with number issued by a government agency to the proctor before entering the examination room.
- 7) Candidates must dress properly. Wearing collarless shirts is prohibited; otherwise, entry to the examination will be denied.
- 8) Late arrival is beyond 30 minutes after the start time is not permitted, and candidates may not leave the room within the first 60 minutes, unless authorized by the proctor for a justifiable reason.
- 9) Any candidate who cheats shall be failed in all subject groups taken in that sitting and barred from reapplying for one year from the date of the offence. In implementing the foregoing, the Subcommittee on the Knowledge Examination for Associate Engineer Licensure shall consider the severity of the conduct on a case-by-case basis and report the action taken to the Council of Engineers Board for acknowledgement.
- 10) Candidates must keep their camera on at all times during the examination.
- 11) Candidates must consent to continuous video and audio recording throughout the examination.
- 12) The Subcommittee may prescribe additional conditions as necessary for the supervision and audit of the Knowledge Examination.
- 13) The Council of Engineers will notify results via electronic means.
- 14) If a candidate registers in advance for the same subject group more than once and later passes that subject group, any remaining registrations for that group become void and the Council will not refund the examination fees.
- 15) If a candidate provides false or materially inaccurate information, the Council reserves the right to fail the candidate in all subject groups, and no fees will be refunded.

Clause 8 The Fundamental Engineering subject group comprises the following:

- (1) Engineering Drawing
- (2) Engineering Mechanics: Statics

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- (3) Engineering Materials
- (4) Computer Programming

Clause 9 The Discipline-specific Engineering subject group comprises the following:

1) Civil Engineering

(1) Compulsory subjects – 3 groups, as follows

Group	Subjects
1) Structures	Theory of Structures
	Structural Analysis
2) Structural Design	Reinforced Concrete Design
	Timber and Steel Design
3) Soil Mechanics	Soil Mechanics

(2) Elective subjects – 4 groups; choose 1 group to sit:

Group	Subjects
1) Highway Engineering	Highway Engineering
2) Hydraulic Engineering	Hydraulic Engineering
3) Survey Engineering	Route Surveying
4) Construction	Construction Engineering and Management

(3) Candidates must take written examinations in the three compulsory groups and may choose one elective group. Each group contains 25 questions; total 100 points (all questions carry equal weight)

2) Mining Engineering

(1) Compulsory subjects – 3 subjects, as follows:

Mining Engineering	Metallurgical Engineering
1) Surface Mining and Mine-Design	1) Chemical Metallurgy
2) Underground Mining and Mine Design	2) Physical Metallurgy
3) Mineral Processing	3) Mechanical Behavior of Materials

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(2) Elective subjects – 4 groups; choose 1 group to sit:

Group	Subjects
1) Mine Economics	1) Materials Characterization
2) Geotechniques	2) Metal Forming
3) Mineral Processing II	3) Corrosion of Metals
4) Mine Planning and Design	4) Failure Analysis

(3) Candidates must take written examinations in the 3 compulsory subjects and may choose 1 elective subject. Each subject comprises 25 questions, for a total of 100 points (all questions carry equal weight).

3) Mechanical Engineering

(1) Compulsory subjects – 3 subjects, as follows:

- 1) Mechanics of Machinery
- 2) Machine Design
- 3) Heat Transfer

(2) Elective subjects – 4 subjects; choose 1 to sit, as follows:

- 1) Automatic Control
- 2) Internal Combustion Engines
- 3) Refrigeration and Air Conditioning
- 4) Power Plant Engineering

(3) Candidates must take written examinations in the 3 compulsory subjects and may choose 1 elective subject. Each subject comprises 25 questions, for a total of 100 points (all questions carry equal weight).

4) Electrical Engineering

(1) Compulsory subjects – 3 subjects, as follows:

Power Track	Communications Track
1) Electrical Machines	1) Principle of Communication
2) Electrical Power System Design	2) Data Communication and Networking
3) Electrical Power System	3) Digital Communication

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(2) Elective subjects –4 subjects; choose 1 to sit, as follows:

Power Track	Communications Track
1) Electrical Instruments and Measurements	1) Electrical Instruments and Measurements
2) Power Electronics	2) Optical Communication
3) High Voltage Engineering	3) Microwave Engineering
4) Power System Protection	4) Antenna Engineering

(3) Candidates must take written examinations in the 3 compulsory subjects and may choose 1 elective subject. Each subject comprises 25 questions, for a total of 100 points (all questions carry equal weight).

5) Industrial Engineering

(1) Compulsory subjects –3 subjects, as follows:

- 1) Safety Engineering
- 2) Production Planning and Control
- 3) Quality Control

(2) Elective subjects –4 subjects; choose 1 to sit, as follows:

- 1) Industrial Plant Design
- 2) Industrial Work Study
- 3) Engineering Economy
- 4) Operations Research

(3) Candidates must take written examinations in the 3 compulsory subjects and may choose 1 elective subject. Each subject comprises 25 questions, for a total of 100 points (all questions carry equal weight).

6) Environmental Engineering

(1) Compulsory subjects –3 subjects, as follows:

- 1) Water Supply Engineering
- 2) Wastewater Engineering
- 3) Solid Waste Engineering

(2) Elective subjects – 4 subjects; choose 1 to sit, as follows:

- 1) Air Pollution Engineering
- 2) Hazardous Waste Treatment
- 3) Building Sanitation

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(3) Candidates must take written examinations in the 3 compulsory subjects and may choose 1 elective subject. Each subject comprises 25 questions, for a total of 100 points (all questions carry equal weight).

7) Chemical Engineering

(1) Compulsory subjects –3 subjects, as follows:

- 1) Fluid Flow
- 2) Heat Transfer and Mass Transfer
- 3) Chemical Engineering Kinetics and Reactor Design

(2) Elective subjects –4 subjects; choose 1 to sit, as follows:

- 1) Chemical Engineering Thermodynamics
- 2) Process Dynamics and Control
- 3) Chemical Engineering Plant Design
- 4) Safety in Chemical Operation / Environmental Chemical Engineering (choose only one subject)

(3) Candidates must take written examinations in the 3 compulsory subjects and may choose 1 elective subject. Each subject comprises 25 questions, for a total of 100 points (all questions carry equal weight).

Clause 10 The qualifications, criteria and procedures for registration of Knowledge Examination Centers, together with the systems and operating practices related to examination administration, shall be as prescribed by the Council of Engineers Board.

Clause 11 The conduct and supervision of the Knowledge Examination, including notifications, permissions/approvals and payment of fees, may be carried out by electronic means. In implementing the foregoing, electronic data and records shall be used and shall have the same legal effect as paper records in accordance with the law on electronic transactions.

Promulgated on 11 August B.E. 2565 (2022)

(Signed)

Associate Professor Piyabutr Wanichpongpan
President, Council of Engineers