The Institution of Engineers, Bangladesh

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AMIE (ELECTRICAL ENGINEERING)

CREDIT HOUR SUMMARY BASED ON IEB AMIE- UNIVERSITY COMPARISON

Serial		IEB Old Syllabus Subjects Section A & B (Electrical Engineering)	Total AMIE Subject Equivalent Credit		
1	Section A	Engineering Mathematics	16	75	136
2		Physics	8		
3		Engineering Mechanics	7		
4		Basic Fluid Mechanics	6		
5		Thermal Engineering	9		
6		Elementary Electrical Engineering	7		
7		Elementary Electronics	9		
8		Properties and Mechanics of Materials	13		
9	Section B Compulsory	Electrical Machines	10	49	
10		Transmission and Distribution of Electrical Power	6		
11		Semiconductor Devices	9		
12		Network Analysis	6		
13		Measurement and Instrumentation	6		
14		Computer Fundamentals	12		
15	Section B Any two subjects as electives	Telecommunication Engineering	6	12	
16		Advanced Electronics	6		
17		Switchgear and Protective Devices	6		
18		Electromagnetic Theory	6		
19		Power Station	6		
20		Power System Analysis	6		
21		Microwave Engineering	6		
22		Control System	6		

Note:

(a) AMIE is equivalent to the B. Sc. Engineering and is recognized by the Government of Bangladesh for all recruitment & higher study purposes.
(b) 40% is the Pass mark.
(c) To graduate, a candidate must pass sixteen subjects.

Numerical Grade	Letter Grade	Grade Point
80% or above	A+ (A plus)	4.00
70% to less than 80%	A (A regular)	3.50
60% to less than 70%	B+ (B plus)	3.00
50% to less than 60%	B (B regular)	2.50
45% to less than 50%	C (C regular)	2.25
40% to less than 45%	D (D regular)	2.00
less than 40%	F	0.00

Under the IEB Rules and Syllabus for the Associate Membership (AMIE) Examination, candidates admitted via the HSC route must complete a two-year supervised engineering apprenticeship in an engineering organization or firm duly recognized by the Institution. This apprenticeship is carried out under the direct supervision of IEB Corporate Member(s) and is substantiated through formal recommendations, annual training reports, and certification of engineering activities undertaken during the training period. Furthermore, the candidate remains under the continuous supervision of an IEB Corporate Member throughout the entire course of study, from admission until successful completion of the AMIE.

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examinations. By contrast, candidates entering through the four-year Diploma in Engineering route, where eligible, are granted direct studentship status and are exempt from this additional two-year apprenticeship requirement.

While the IEB Rules do not assign a formal academic credit value to this supervised apprenticeship, the documented training may, for purposes of comparative academic assessment within the Bangladesh context, reasonably be characterized as industrial or practical training constituting work-based learning. Depending on the assessment framework applied, a competent evaluator may consider it appropriate to recognize a corresponding portion of this training as broadly equivalent to one academic semester (approximately 15 credits). Any such credit consideration is indicative in nature rather than an official credit award conferred by the IEB, and remains subject to final determination by the relevant university, professional body, or recognition authority. Additionally, evaluators may consider relevant prior learning from HSC, Diploma in Engineering, and supervised apprenticeship for further engineering recognition or higher studies.

BANGLADESH CREDIT HOURS AND ECTS WORKLOAD-BASED COMPARISON

The following comparison explains how Bangladesh semester credit hours may be compared with the European Credit Transfer and Accumulation System (ECTS) on a student-workload basis. The calculation is illustrative and should not be treated as an automatic or officially awarded ECTS conversion.

1. Workload Basis

1 ECTS credit = 25–30 hours of student workload. 1 credit hour ≈ 45 hours. Conversion ratio: 1 ECTS ≈ 0.5 credit hours.

For comparison, a Bangladesh semester credit is about 15 hours of classroom/contact instruction plus about 30 hours of independent or out-of-class academic work, for a total workload of about 45 hours.

2. Workload-Based Conversion

1 Bangladesh Credit ≈ 45 workload hours
1 Bangladesh Credit ≈ 45 ÷ (25-30) = approximately 1.5-1.8 ECTS
1 ECTS ≈ (25-30) ÷ 45 = approximately 0.56-0.67 Bangladesh Credits

Therefore, the statement "1 ECTS ≈ 0.5 credit hours" may be used only as a rough approximation. On the stated workload assumptions, approximately 0.56-0.67 Bangladesh semester credits per ECTS is mathematically more precise.

Using the same workload-based calculation:

136 Bangladesh/IEB-equivalent credits × 45 hours = 6,120 workload hours

6,120 ÷ 30 = 204 ECTS
6,120 ÷ 25 = 244.8 ECTS

Therefore, **136 Bangladesh/IEB equivalent credits ≈ 204–244 ECTS on an indicative workload basis.**

14.09.26

Prof. Dr. Engr. Md. Sabbir Mostafa Khan
Honorary General Secretary

Distribution: for kind information

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