

BAE 701 Architecture Subjects

- AchE401 Architecture Theory
- AchE402 Architectural Design
- AchE403 Building Construction
- AchE404 Building Services
- AchE405 Construction Materials
- AchE406 Sustainable Building Design
- AchE407 Architectural Drafting
- AchE408 Construction Quantity Surveying
- AchE501 Architectural Management
- AchE502 Interior Design
- AchE503 Green Building Design
- AchE504 Construction Contract
- AchE505 Solar Architecture & Smart House Design
- AchE506 Architecture Commercial Design
- AchE507 Unban Design
- AE508 Landscape Design
- AchE601 Architectural Design & Ethics
- AchE602 Building Survey & Reporting
- AchE603 Building Control Systems
- AchE604 Sustainable Architecture
- AchE605 Details Design
- AchE606 Outdoor Structure Design

BAE 702 Engineering Management

- Management
- Quality Management
- Performance Management
- Project Planning
- Project Management

BAE 703 Leadership & Human Resources Management

- Human Resources Management
- Organization and Leadership

BAE 704 Risk Management & Industrial Safety

- Risk Management
- Risk assessment
- Non destructive Testing and Preventive Management
- Industrial Safety

BAE705 – Engineering Competency Development

• Assessment Types and Methods

(100% coursework)

- **Option A** – **Research Proposal (RP)**@ (at postgraduate standard) for Engineering Professionals in Academic Field
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- **Option B** – **Feasibility Study** on an Approved Engineering Project for Engineering Professionals in Practice.
- **@ Suggested Format of Research Proposal (RP):**

Research Proposal (Max: 50 pages)	
1	Introduction to Research/Project Title
2	Research Goal: Aim; Objectives; Key Questions
3	Problem Statement
4	Importance of the Study (Rational of study)

5	Initial literature review
6	Proposed research methodology
7	Proposed contents for each chapter
8	Initial reference
9	Work plan or schedule of works

- **Report** (60% weightage) Plus **Oral Presentation** (40% weightage)

Oral Presentation/Viva: Assessment Criteria (within 45 minutes: 30 minutes for presentation + 14 minutes for Q&A)		Percentage (%)
1	Overview : Title stated and defined	4
2	Body: Scope; Objectives; Proposed research methodology; likely outcomes; Work plan; Possible funding.	8
3	Technique: Good diction; Gestures; Visual aids; Logical flow of presentation	8
4	Questions & Answers: positive and confident; clear and logical; provide data/evidence to support the answer (15 minutes)	16
5	Summary	4
Total		40

Recommended Reading Materials

UK-SPEC

<https://www.engc.org.uk/ukspec.aspx>

<https://www.aerosociety.com/media/3836/uk-spec-third-edition.pdf>

<https://www.aerosociety.com/media/3846/step-by-step-guide-to-registration.pdf>

Engineers Australia: Stage 1- Competency Standards

<https://www.engineersaustralia.org.au/Chartered>

https://www.engineersaustralia.org.au/sites/default/files/2019-11/Stage1_Competency_Standards.pdf

https://www.engineersaustralia.org.au/sites/default/files/Stage%201%20Guide_November%202019.pdf

USA- NCEES

<https://ncees.org/exams/examinee-guide/>

<https://ncees.org/licensure/>

UK-ICE

<https://www.ice.org.uk/membership>

<https://www.ice.org.uk/my-ice/routes-to-ice-membership>

<https://www.ice.org.uk/my-ice/my-membership/member-assessment>

<https://www.ice.org.uk/my-ice/membership-documents/ipd-online-guidance>

<https://thecivilengineeringexam.com/ice-attributes-introduction/>

UK-IStructE

<https://www.istructe.org/membership/chartered-membership/>

<https://www.istructe.org/training-and-development/ipd/>

<https://www.istructe.org/training-and-development/membership-exams/>

<https://www.istructe.org/training-and-development/membership-exams/professional-review-interview/>

PEB-Singapore

<https://www.peb.gov.sg/>

https://www.peb.gov.sg/pe_registration_intro.aspx

https://www.peb.gov.sg/pereg_fee.aspx

https://www.peb.gov.sg/pereg_ppe.aspx

SOCIÉTÉ NATIONALE DES INGÉNIEURS PROFESSIONNELS DE FRANCE (SNIPF)

www.iqytechnicalcollege.com/SNIF.zip

Society of Professional Engineers International

www.thespeukinternational.org

<http://www.thespeukinternational.org/membershipinformation.htm>

<http://www.thespeukinternational.org/internationalapplication.htm>

<http://www.thespeukinternational.org/Code%20of%20Professional%20Conduct.htm>

BAE 707 Engineering Report Writing

Report Writing

[Electrical Report](#)

BAE 707 Engineering Ethics

Society of Professional Engineers-UK

<http://www.professionalengineers-uk.org/index.php/the-society/code-of-professional-conduct>

Code of Professional Conduct

All individuals registered as Professional Engineers and those aspiring to become registered Professional Engineers shall deliver services in accordance with the Society's Code of Professional Conduct and shall:

1. Competence

- a) only undertake professional tasks for which they are competent and will at all times exercise all reasonable professional skill and care to prevent avoidable danger to health or safety and the creation of adverse impacts on the environment.
- b) maintain and broaden their knowledge, experience and competence and encourage others to do so.

2. Integrity

- a) treat all persons fairly with respect and without bias
- b) avoid where possible real or perceived conflict of interest and advise affected parties should such conflicts arise.
- c) observe the proper duties of confidentiality owed to appropriate parties.
- d) discharge their professional duties with integrity, impartiality and objectivity and have no involvement with any form of bribery.

3. Responsibility

- a) accept appropriate responsibility for work carried out under their supervision.
- b) assess relevant risks and liability and, if appropriate, have in force appropriate liability insurances.
- c) notify the Society within 28 days:
 - if convicted of a criminal offence other than parking fines or convictions for exceeding the speed limit:
 - upon becoming bankrupt or disqualified as a Company Director:
 - if they are removed from the membership of another professional body as the result of a matter relating to conduct.
- d) notify the Society of any significant violation of the Code of Conduct by any Professional Engineer on the register or any aspiring member seeking to gain access to the register.

4. Information

- a) co-operate with the Society and provide such information as may be requested to facilitate any investigation into the conduct of any Professional

Engineer on the register or any aspiring member seeking to gain access to the register.

5. Relationships

a) have due regard to their duty of care to clients and not take advantage of any client or potential client for whatever cause or reason in obtaining and carrying out instructions.

b) put all terms of engagement in writing and state the fees to be charged; whenever practicable, these should be issued to the client before a project is begun.

c) inform his/her client immediately if it appears that his/her estimate as to the total fees to be charged is likely to be or will be exceeded.

d) take care not to mislead a client as to the range of services that a quoted fee is intended to cover and the amount of future fees which may be involved.

Note in respect of relationships: Any Professional Engineer on the register or any aspiring member seeking to gain access to the register shall not:

- accept a professional assignment if he/she is aware or has reasonable cause to suspect that another member is acting for the client in respect of the same assignment, until either the first contract has been determined by the client, or the other member has consented to him acting.
- induce a client to agree to pay sums of money which are not justified by reference to the work which the member has carried out or has been instructed to carry out.
- offer or give any fee, commission, discount or other inducement (financial or otherwise) to a third party in return for the introduction of clients or particular professional assignments unless, before entering into a legally binding agreement

with that client he/she makes full disclosure to the relevant client of the nature or amount of such fee, commission, discount or inducement and the name of the person or persons to whom such fee, commission, discount or inducement was offered or given.

6. Practice

a) Ensure that in respect of any firm in which he/she is or is held out to be a sole proprietor, partner or a director or through which he/she practises or conducts business:

- the composition (list of partners or directors) is clearly stated on all appropriate documentation and that where there has been a material alteration to the composition, all clients of the firm or company are notified of the change promptly;
- the style or title does not adversely reflect upon his/her professional status as a Professional Engineer and the dignity and reputation of the engineering profession;
- the name is not misleading or liable to cause confusion with the public, nor does it imply any partnership arrangement with or endorsement of services by the Society.

b) Titles associated with the registration of Professional Engineers such as “PEng” and “PEng(UK)” and membership of the Society such as “Fellow of the Society of Professional Engineers”, “Member of the Society of Professional Engineers”, and all others relating to membership of the Society of Professional Engineers, and the designations FSPE, MSPE, Hon.FSPE, Hon.MSPE shall only be used or authorised to be used in connection with a partnership or company

- in the name of any partnership in which such member practises provided all the member’s partners are similarly entitled to use the Title and designatory letters
- to describe the name of any company provided only that all the shareholders and/or members of such company and all the directors of such company are similarly entitled to use the Title.
- to describe the name of a firm or business which is not a partnership or company in which he/she practises provided such use of the Title does not give the impression that any other person or persons with whom such member is carrying on business or whom such member employs or with whom such member is associated in any way is entitled to use the same Relevant Title or, if the impression referred to is given, such other person or persons is or are similarly entitled to use the Title.

7. Managerial responsibility

a) In addition to the responsibilities referred to in the Rules of Professional Conduct, but subject to the following, any Professional Engineer on the register or any aspiring member seeking to gain access to the register shall be prima facie responsible, as a matter of professional conduct, for the acts or omissions including, in particular, breach of any of the provisions of the Articles and Bye-Laws of the Society or these Rules of Professional Conduct of:

- any firm in which the member is, or holds him/herself out to be, or allows him/herself to be held out as a partner, or any firm which the member allows to use his/her name and/or style

and title or designatory letters in any of its advertisements, publicity material or notepaper;
and

- any company of which he/she is a director or any co-director of that company or any company which the member allows to use his/her name and/or style and title or designatory letters in any of its advertisements, publicity material or notepaper.

b) If any Professional Engineer on the register or any aspiring member seeking to gain access to the register is able to show that, without default on his/her part, he/she was not aware, and there was no reason for him to be aware at the time of any breach of these provisions by any firm or company referred to above and he/she had, prior to the breach, taken all reasonable steps to ensure that such a breach would not occur, then he/she shall not be in breach of this Rule.

8 Publicity and Advertising

a) Any Professional Engineer on the register or any aspiring member seeking to gain access to the register may publicise his/her services or permit another person to do so, but in doing so the member must have due regard to the standards set by the Advertising Standards Authority and any standards set by any other regulatory or governmental authority in relation to advertising and ensure that any publicity for which he/she is in any way responsible is neither inaccurate nor misleading.

b) In all advertising, publicity material or public statements for which any Professional Engineer on the register or any aspiring member seeking to gain access to the register is in any way responsible, he/she shall avoid all claims of superiority over, or critical comparisons of, the services provided by other engineers and shall avoid any direct comparison of fees and charges levied by other engineers.

c) Any Professional Engineer on the register or any aspiring member seeking to gain access to the register may only refer to the name of a client in any advertising, publicity material or public statement if the prior written consent of that client is first obtained.

d) Advertisements or other publicity material issued by any Professional Engineer on the register or any aspiring member seeking to gain access to the register or by a firm in which they are held out to be a partner or director or a company through which they practise or conducts their business may state (subject to compliance with any other relevant regulations or legal requirements) either expressly or implied that they, the firm or the company (as

the case may be) offers expertise or specialist advice in relation to a particular field of engineering provided only that this is the case.

ASSIGNMENT

From newspaper, journal, internet, online chatting groups, show one event that signify the breach of engineering ethics such as use of substandard materials, breach of safety law, breach of fair practice, attempt to monopolizing , use of law and authority for safeguarding own benefits or personal associates , depressing others and highlight how engineering ethics are breached.

- BAE 707 Engineering Ethics

(Prepared by Dr Sam Man Keong)

www.iqytechnicalcollege.com/BAE707-Engineering Ethics- SAmMK-2020.pptx

- BAE 708 Engineering Knowledge

Civil Engineering

BAE708 – Engineering Knowledge

[Special Routes to FSIET: Thesis/Report; Project]

Assessment Types and Methods

(100% coursework)

Option A – Research Thesis/Report (RT)@ (at postgraduate standard) for Engineering Professionals in Academic Field

Option B – Design on an Approved Engineering Project for Engineering Professionals in Practice.

@ Suggested Format of Research Thesis (RT):

Research Thesis (Max: 200 pages; excluding appendices)

1	Title Page
2	Acknowledgement
3	Declaration
4	Abstract
5	Content Page
6	List of illustrations
7	List of photographic plates, if any
8	Body (actual report) Chapter 1 – Introduction Chapter 2 – Literature Review Chapter 3 – Proposed Research Methodology Chapter 4 – Findings and Discussion Chapter 5 – Conclusions and Recommendations
9	List of References
10	Appendices

Report (60% weightage) Plus **Oral Presentation** (40% weightage)

Oral Presentation/Viva: Assessment Criteria (within 45 minutes: 30 minutes for presentation + 15 minutes for Q&A)	Percentage (%)
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