JUPAS Code: JS 1213
Bachelor of Engineering in Architectural Engineering (ArcE)

Department of Architecture and Civil Engineering
City University of Hong Kong
What is Architectural Engineering

- First of all ...

Architectural Engineering ≠ Architecture Studies

- Architectural Engineering relates to the engineering works for buildings. You are trained to be an engineer **NOT architect**
Background of ArcE Major

- The Architectural Engineering programme was retitled from the an old programme named BEng in Building Services Engineering (BSE)
- The BSE major was launched in 1996 (over 23 years old).
- The programme has been fully accredited by HKIE. Graduates can join the HKIE Scheme-A training of the following disciplines:
  - Building Services Discipline
  - Energy Discipline
  - Fire Discipline*

* Students should take the two fire related electives in final year.
What is ArcE/BSE?

- The mechanical and electrical systems servicing the functions of buildings (i.e. Building Services systems) including the following systems.

  - **Mechanical**
    - Heat, ventilation and air conditioning (HVAC)
    - Fire services
    - Water supply and liquid waste disposal
    - Etc.

  - **Electrical**
    - Power supply
    - Lighting
    - Lifts and escalators
    - Building Management
    - Etc.
**BSE vs. Human Body**

- Respiratory system ↔ Ventilation System
- Brain ↔ Building Management System
- Heart ↔ Chiller Plant / Transformer Room
- Blood Delivery ↔ Water/ Electricity Supply
- Immune System ↔ Fire Services/ Security
What is Building Services Engineering?

- It is related to the engineering systems with a building, for example:
  - Air-conditioning system
  - Electrical supply system
  - Fire protection system
  - Piped services
  - etc.

- Podcast from RTHK
Courses of Major in ArcE

- Year 1 – Common Year
  - English, maths, science, general education, communication, etc.

- Year 2 – Basic Engineering Training
  - Engineering maths, material, thermodynamics, fluid mechanics, electricals, green building, contract, etc.

- Year 3 – Building Services Specifics
  - Air conditioning, electrical services, fire services, piped services, building information management, etc.

- Year 4 – Projects and electives
  - Integrated building project development (IBPD), electives for advanced topics, and final-year-project (FYP), etc.
Frontier Technologies

- You have opportunity to investigate the topics of frontier technologies in FYP.
  - Building Energy
  - Indoor Air Quality
  - Fire Safety
  - Intelligent Building
  - Sustainability
  - Green Building
  - Etc.
Engineering Practical Training

- Year 2 summer – Industrial Training (Compulsory)
  - Receive hand-on training of basic engineering works (compulsory)
- Year 3 summer – Industrial Attachment Scheme (Non-compulsory but well sought-after)
  - Summer internship in engineering companies (e.g. consultant, contractor, utilities, developers, etc.)
Job Opportunities

- Major Infrastructure Projects in Hong Kong, Macau, mainland China and overseas.
- One basic infrastructure project creates a lot of building projects.
- A building needs building services engineers throughout the building life.
- The number of building services engineering graduates from UGC-funded universities is very limited. Graduates from these programmes are the most sought-after in building industry.
Careers of ArcE (BSE) graduates

- Government
- Developer
- Consultant
- Contractor
- Supply Engineer
- Property Manager
- Academic
- Etc.
General ArcE (BSE) Job Nature

- Engineering Management
- System design and calculation
- Prepare tender document
- Meeting with professionals
- Liaison with Government
- Monitor project progress
- Engineering training
# Minimum Admission Scores and Weighting of Subjects

## JS1213

**BEng Architectural Engineering**

<table>
<thead>
<tr>
<th>4 core + 2 elective subjects</th>
<th>English Language</th>
<th>Chinese Language</th>
<th>Mathematics (Compulsory Part)</th>
<th>Liberal Studies</th>
<th>Elective Subjects</th>
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<tbody>
<tr>
<td>Weighting:</td>
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<td>Minimum Level Required:</td>
<td>Level 3</td>
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<td>Level 3 in one elective subject from:</td>
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<td>• Integrated Science</td>
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<td>• Physics</td>
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<td>Level 3 in any elective subjects (except “Other Languages”)</td>
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Minimum Admission Scores and Weighting of Subjects
Welcome to the ArcE Major

Enquiry
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