BEng in Civil Engineering (JS1214)
Department of Architecture and Civil Engineering
City University of Hong Kong
What is Civil Engineering?

... You wake up in the morning!
Open your eyes ... see your room (home)!
Who made the buildings that you live, work and play?

Civil Engineer!!
What is Civil Engineering?

Then, you go to wash your face and have your breakfast!
You can get fresh water from the tap!
Who made it?
Civil Engineer!!
What is Civil Engineering?

Then, you go to school/work...
You go through many roads, bridges and tunnels.
Who made it?

Civil Engineer!!
Without Civil Engineering ... 

- No buildings → No home 
- No sewage treatment plant → No fresh water 
- No transportation 
- No signature long-span bridges 
- No high-rise symbol 
- People endangered by natural features, such as typhoon and earthquake! 
- More ...
Civil Engineering Disciplines

- Structural Engineer
- Geotechnical Engineer
- Transportation Engineer
- Environmental Engineer
Civil Engineering Disciplines: Structural Engineering

- Design structures to withstand various loadings (e.g., wind and earthquake)

- Choose appropriate materials (e.g., steel and concrete) to meet design specifications (e.g., Eurocodes)
Civil Engineering Disciplines: Geotechnical Engineering

• Deals with earth materials, including soil, rock, and groundwater

• Interfaces with most of the other civil sub-disciplines (Foundation Design, Subgrades of roadway)
Civil Engineering Disciplines: Transportation Engineering

- Involved with the safe and efficient movement of both people and goods
- Design and maintain all types of transportation facilities
Civil Engineering Disciplines: Environmental Engineering

• Develop solutions to environmental problems

• To improve recycling, waste disposal, public health, and control of water and air pollution
Study plan: Year 1
Beginner ...

- **English** for University and Engineering ...
- Fundamental science/engineering courses
  - mathematics, science, general education, communication, etc.
Study plan: Year 2
Basic knowledges

• Fundamental courses about ...
  – Structures: Mechanics
  – Rocks: Geology
  – Fluid
  – Environmental engineering
  – Transportation engineering
  – Mathematics
Study plan: Year 3
Engineering

• Engineering courses about:
  – Structural analysis
  – Structural design (reinforced concrete and steel)
  – Soil
  – Construction contract and management
  – Hydraulics and hydrology
Study plan: Year 4
Advanced & integrated knowledges

- Individual **final year project** (FYP)!!
- Group project with other disciplines (e.g., architect and building services engineers)
  - **Integrated Building Project Development** (IBPD)
- Advanced courses about:
  - Structural analysis: Finite element analysis
  - Geotechnical engineering
- Stream specific **electives** about:
  - Structural engineering
  - Transportation engineering
Globalization

• This major provides opportunities for:
  – Two-certificate Joint Bachelor’s Degree Programme in BEng in Civil Engineering with National Taiwan University (NTU)
  – Student exchange
  – Study tour
  – Overseas internship scheme
Joint BEng in Civil Engineering with National Taiwan University (NTU)

- Study plan:
  - Year 1: CityU
  - Year 2 and 3: NTU
  - Year 4: CityU

- **Two graduation certificates**: one conferred by the CityU and one by the NTU upon fulfilling the degree requirements stipulated by the respective universities.
EMPLOYMENT SITUATION

• Job Positions
  – Civil Engineer Graduate
  – Assistant to Contract Manager
  – Management Associate
  – Assistant Traffic Engineer
  – etc.

• Potential Employers
  – Civil Engineering and Development Department
  – Highway Department
  – Housing Department
  – Buildings Department
  – Drainage Services Department
  – Gammon Construction Limited
  – Dragages Hong Kong
  – Ove Arup & Partners Hong Kong Limited
  – AECOM Asia Company Limited
  – etc.
### JS1214: BEng Civil Engineering

**Minimum admission requirement**

<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>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>2</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>Elective 1</td>
</tr>
<tr>
<td>Minimum Level Required</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 3</td>
<td>Level 2</td>
<td>Elective 2</td>
</tr>
</tbody>
</table>

- **Elective Subjects**
  - Elective 1
  - Elective 2

Level 3 in one elective subject from:
- Combined Science (Biology and Physics)
- Combined Science (Chemistry and Physics)
- Integrated Science
- Physics

Level 3 in any elective subjects (except “Other Languages”)

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JS1214 BEng in Civil Engineering
Thank You

Contact Us
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