

**SBS5433
Renewable Energy**

For students of the following programmes:		
CE	EEM	BSE
		✓

Module Introduction:

This module introduces the concepts of renewable energy resources and potential applications. It also enables students to design and test major renewable energy application systems, as well as the awareness of renewable energy as alternatives to solve the environmental problems associated with the use of conventional fossil fuels.

Class Schedule:

Lecture Wednesdays 1100 – 1300
Tutorial Wednesdays 1300 – 1400

Class Quota: 120

Pre-requisite(s): Nil

**SCE5441
Hydraulic and Hydrology**

For students of the following programmes:		
CE	EEM	BSE
✓		

Module Introduction:

This module aims to equip students with knowledge of pipe flow, open channel flow, hydrology and their applications in civil engineering and drainage work. It will prepare students to work in the water supply and drainage industry.

Class Schedule:

Daytime Class

Lecture Wednesdays 1330 – 1530
 Tutorial (1) Wednesdays 1530 – 1630
 (2) Wednesdays 1630 – 1730

Evening Class

Lecture Thursdays 1900 – 2100
 Tutorial Thursdays 2100 – 2200

Class Quota: Daytime Class: 80
 Evening Class: 40

Pre-requisite(s): SCE4241

SCE5421

Prestressed Concrete & Water Retaining Structures

For students of the following programmes:		
CE	EEM	BSE
✓		

Module Introduction:

This module aims to equip students with the design philosophy and methodology used in prestressed concrete and water retaining structures. Students will learn how to carry out designs with consideration of safety, cost, serviceability and environmental issues. The module also aims to prepare students with professional knowledge and skills for structural engineering work.

Class Schedule:

Lecture Wednesdays 0930 – 1130
 Tutorial (1) Wednesdays 1130 – 1230
 (2) Thursdays 1430 – 1530

Class Quota: 80

Pre-requisite(s): SCE5222

SCE5411

Advanced Construction Materials and Technology

For students of the following programmes:		
CE	EEM	BSE
✓		

Module Introduction:

This module aims to introduce recent developments in the fields of concrete technology and cement-based composites arising from introduction of new materials, development of new techniques, growing concerns and emphases on durability and sustainability.

Class Schedule:

Lecture Mondays 1430 – 1630
Tutorial (1) Mondays 1630 – 1730
 (2) Fridays 1230 – 1330

Class Quota: 80

Pre-requisite(s): SCE4112

SEV5472

Carbon Management for Engineers

For students of the following programmes:		
CE	EEM	BSE
	✓	

Module Introduction:

This module provides students with an overview on the principles, technical and administrative aspects of carbon-dioxide emissions, with special reference to the construction, building, energy and petrochemical industry. It discussed energy efficient design, carbon auditing, carbon trading, carbon tax, cultural aspects and future development. It also addresses CO₂ neutral investments, reduction and avoidance of CO₂ emissions by technical measures and new processes, and future development in the capture and storage of CO₂ in a technically and economically feasible manner.

Class Schedule:

Lecture Wednesdays 0930 – 1130
 Tutorial Wednesdays 1130 – 1230

Class Quota: 40

Pre-requisite(s): SEV5371

SEV5432

Noise & Vibration Control

For students of the following programmes:		
CE	EEM	BSE
	✓	

Module Introduction:

This module provides students with detail discussion to the principles and practice of noise and vibration control. It focuses on the environmental aspects of noise and vibration, and control design and environmental noise impact assessment. International and local standards for noise and vibration control will also be discussed.

Class Schedule:

Lecture Wednesdays 1400 – 1600
Tutorial Wednesdays 1600 – 1700

Class Quota: 40

Pre-requisite(s): SEV4231

SBS5322

Basics of Building Information Modelling

(※ Programme Core module for BSE programme)

For students of the following programmes:		
CE	EEM	BSE
✓	✓	※

Module Introduction:

This module introduces the basic concepts and essential background of building information modelling (BIM) to students of building services engineering and other related professional disciplines. It extends the knowledge in engineering drawing and computer-aided design (CAD) in construction projects, and develop skills necessary for understanding virtual design and construction (VDC). Students will learn the conceptual background of BIM and apply the principles for the various aspects of BIM.

Class Schedule:

Weekday Class

Lecture Mondays 0930 – 1130
 Tutorial (1) Mondays 1130 – 1230
 (2) Mondays 1230 – 1330

Weekend Class for PT students

Lecture Saturdays 0930 – 1130
 Tutorial Saturdays 1130 – 1230

Class Quota: Weekday Class: 50 (CE & EEM) + 100 (BSE)
 Weekend Class: 40 (CE & EEM) + 20 (BSE)

Pre-requisite(s): Nil

**SCE5481
Principles of Project Finance**

For students of the following programmes:		
CE	EEM	BSE
✓	✓	✓

Module Introduction:

This module aims to introduce students to the concepts and processes in project funding, particularly for capital intensive and infrastructure projects. It introduces the techniques of financial instruments, appraisal of risks and funding options and provides an overview of the role of public and private sector funding mechanisms. Students will be able to understand the financial implications of a project, particularly the role of a project engineer.

Class Schedule:

Lecture Fridays 0930 – 1130
Tutorial Fridays 1130 – 1230

Class Quota: 40 (CE & EEM & BSE)

Pre-requisite(s): Nil

**SCE5482
Construction Law & Practice**

For students of the following programmes:		
CE	EEM	BSE
✓		✓

Module Introduction:

This module aims to equip students with knowledge of construction law and practice in Hong Kong which covers legal and contractual issues that may govern the professional responsibilities of practicing engineers to various stakeholders in public, clients, and the industry. Coping with growing global mobility of civil engineering profession and infrastructure projects in the 21st century, students will also be introduced to the United Nations Commission on International Trade Law (UNCITRAL) and World Trade Organisation (WTO) procurement framework, and will be provided practical insights on common international construction contract forms including FIDIC, ICE Conditions of Contract and NEC3.

Class Schedule:

Lecture Thursdays 1530 – 1730
 Tutorial Thursdays 1730 – 1830

Class Quota: 40 (CE & BSE)

Pre-requisite(s): CE students: SCE4281
 BSE students: SBS5224

SEV5411

Environmental Impact Assessment

(✘ Programme Core module for EEM programme)

For students of the following programmes:		
CE	EEM	BSE
✓	✘	✓

Module Introduction:

This module provides students with an overview on the principles, processes and methods in conducting environmental impact assessment (EIA) and environmental monitoring and audit (EM&A) for infrastructural and development projects. It addresses the relationship of EIA to socio-economic, environmental and ecological systems, and it positions EIA in the context of sustainable development.

Class Schedule:

Lecture Fridays 1900 – 2100
 Tutorial Fridays 2100 – 2200

Class Quota: 30 (CE & BSE) + 10 (EEM)

Pre-requisite(s): CE students: SCE5251
 BSE students: SBS5222
 EEM students: SEV4221 & SEV4231

SEV5351

Integrated Solid Waste Management

(✘ Programme Core module for EEM programme)

For students of the following programmes:		
CE	EEM	BSE
✓	✘	

Module Introduction:

This module aims at providing students with the basic principles and practices of geo-environmental engineering in the remediation of contaminated sites and the technical management of in-situ hazardous waste containment. It also discusses the engineering concepts and techniques in monitoring and control of groundwater pollution, and the geotechnical design and management of landfills and other above-ground and in-situ waste containment systems.

Class Schedule:

Lecture Wednesdays 1430 – 1630
 Tutorial (1) Wednesdays 1630 – 1730
 (2) Wednesdays 1730 – 1830

Class Quota: 10 (CE) + 70 (EEM)

Pre-requisite(s): CE students: SCE5251
 EEM students: SEV4121