PROGRAM HANDBOOK



SUSTAINABLE ARCHITECTURE ENGINEERING

The BRITISH UNIVERSITY IN EGYPT

FACULTY OF ENERGY & ENVIRONMENTAL ENGINEERING

London South Bank University

The undergraduates students'

PROGRAM HANDBOOK

For Sustainable Architecture Engineering

The British University in Egypt

September 2024

Program Handbooks are issued and maintained by the Faculty of Energy & Enviromental Engineering

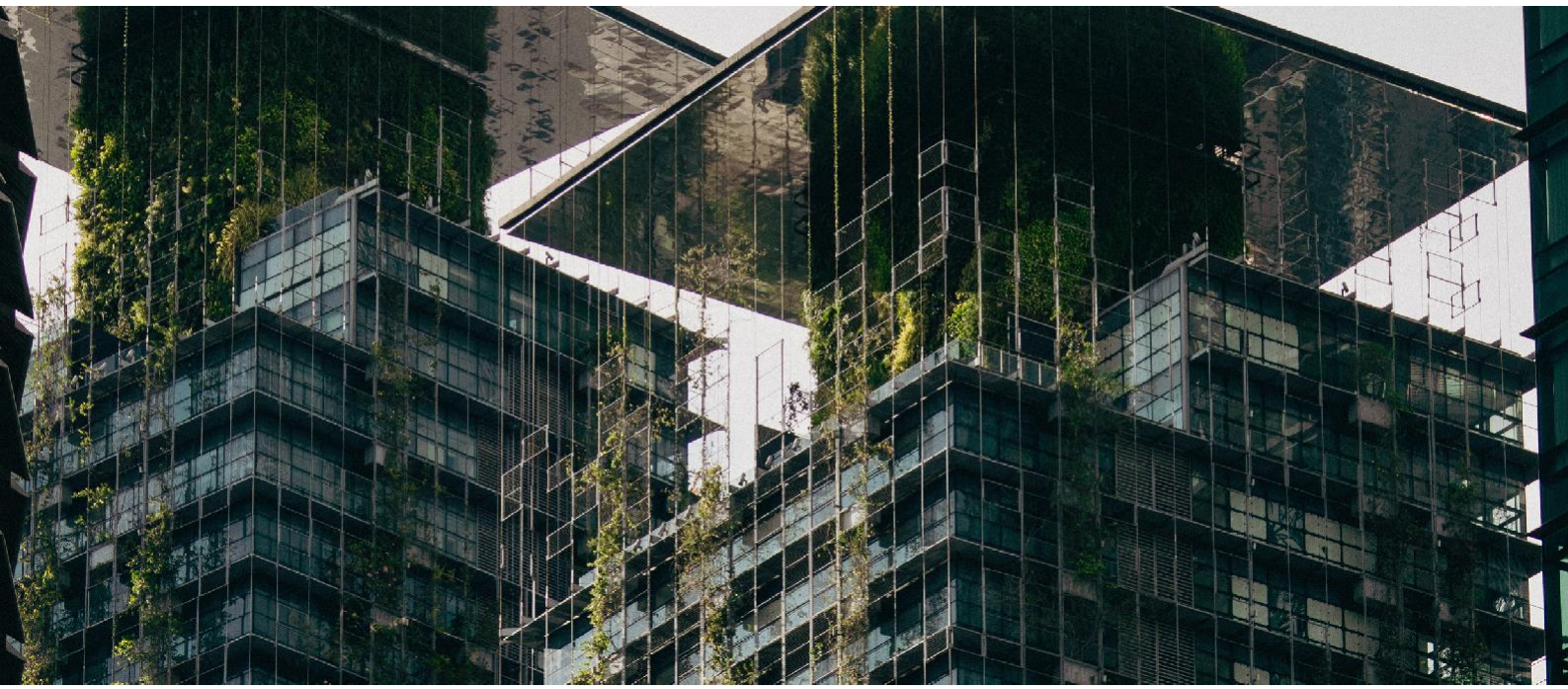
The BRITISH UNIVERSITY IN EGYPT

FACULTY OF ENERGY & ENVIRONMENTAL ENGINEERING

London South Bank University

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A. Welcome to the Department's Staff

We would like to welcome you to the Department of Sustainable Architecture Engineering at the British University in Egypt, and we hope you will make the right choice in selecting your major in the faculty of environmental energy engineering.

The department's vision is to gain and sustain international recognition for being one of the leading schools of environmentally-sustainable architecture with an edge in applying digital technology in environmental design and renewable energy. The department incorporates the UN SDGs into learning and teaching as the inclusion of sustainability, facing new challenges like the rapidly approaching climate crisis and its consequential extreme weather patterns on the built environment.

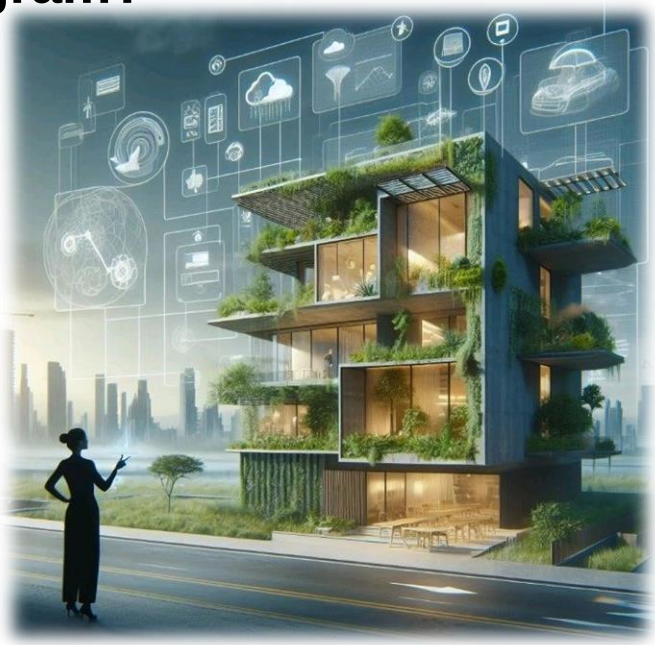
The mission of the department is to create a new generation of engineers and designers who are not only environmentally aware but also able to quantify the environmental and energy impact of their designs to achieve sustainability. New forms of critical thinking and student-centered learning are stressed through our studio-based interdisciplinary curriculum, and our integration of theory and practice.

The department comprises of 2 lecturers, and 5 lecturers part-time. Support staff includes 2 teaching assistants and 2 assistant lecturers, 2 laboratory assistants, a Lab engineer, and an admin. The department has 2 laboratories for academic experiments related
To modules project work and research, one of them is a VR lab. We all work together collaboratively intending to achieve excellence in teaching, research, and experience.

The Sustainable Architecture Engineering handbook is designed to provide a clearer image of the department and Sustainable Architecture Engineering as a major. You will be guided through each section with useful information to keep in mind while completing your degree.

We Hope that you will use this handbook as a guide through your four years in The department. We have designed the handbook with certain information that most of our students find useful. The handbook will help in: Familiarizing you with the department structure, its staff, and its programs. Guiding you through the modules you need to pass in order to achieve your degree. Providing you with knowledge in certain areas that will guide you throughout the course.

B. Why Choose the Program?



Choosing the Sustainable Building Design program is more than just a step toward a career, it's a commitment to shaping the future of our built environment in a way that is responsible, efficient, and forward-thinking. In a world increasingly affected by climate change, resource depletion, and urban expansion, there has never been a greater need for experts who can design buildings and communities that are both functional and sustainable.
Here are some key reasons why this program is a valuable choice:

1. Addressing Global Challenges:
The demand for sustainable solutions in architecture and construction is growing rapidly. With rising global concerns over energy consumption, carbon emissions, and resource scarcity, the building industry is at the forefront of both the problem and the solution. Through the Sustainable Building Design program, you will learn to create designs that minimize environmental impact, use energy more efficiently, and create healthier living environments for communities.

2. Hands-On Learning and Innovation:
Sustainability isn't just a theory, it's a practice. In this program, you will participate in hands-on design projects, collaborate with industry professionals and use cutting-edge tools like Building Information Modeling (BIM) and energy simulation software. By working on real-life case studies and sustainable design challenges, you'll be well-prepared to bring innovative solutions to the world of sustainable architecture and construction.

3. A Growing Career Market:
Sustainable design is not just a trend, it's the future of the building industry. Governments, corporations, and communities are increasingly prioritizing sustainability, driving demand for professionals skilled in sustainable building techniques. Graduates of this program are well-positioned for careers in architecture firms, engineering consultancies, green building certification organizations, design development agencies, and more.

What you can learn

Sustainable Architecture Engineering curriculum and Programme structure allows you to learn the following topics and skills:

- Environmental-Sustainable Architectural Design
- Sustainable tectonics
- Eco design
- Interior Design
- BIM
- Landscape Architecture
- Computer Applications in Sustainable Architecture
- Building Construction and Working Drawings
- Environmental Design and Control Construction Project.
- Management Civil Engineering Based Modules.
- Graduation project to instill different career skills.
- Encourages both independence and teamwork.
- Flexibility and the ability to apply their subject knowledge to other fields.





Where you may work when you graduate

Among several fields in which our Sustainable Architectural Engineering graduate may work, this is a list of common ones:

- Environmental Sustainable Architectural Design
- Interior Design
- Landscape Architecture
- BIM building information modeling
- VR virtual reality
- Graphic Designer
- Construction Project Management

C. Module Contents

In this program, emphasis is placed on the fundamentals of sustainable Architectural engineering principles and techniques along with computer-aided programs and engineering aspects.



Students will learn the basic environmental-sustainable Architectural design engineering and theoretical concepts through a series of mandatory modules and a set of optional modules in several areas of specialization.

This includes sustainable Architectural Design, History of Architecture, Theory of Architecture, Building Construction, Building services and working drawings. Each module in the program has a level. Levels at the BUE reflect the standards adopted by the UK's Higher Education Qualifications Framework (HEQF).

The following listing provides a summary of the modules covered in each degree year of the program, including information on the module's corresponding credit weight, prerequisites, semester taught in, related keywords, and a brief description of topics covered.





C. Module Contents

	Code	Course Title	Cr & SWL			Contact Hours				Classification			
			CH	ECTS	SWL	Lec	Tut	Lab	TT	UR	FR	DR	PR
ESB	SAE523	Energy and human development	2	3	75	2			2	X			
	SAE611	Sustainable Project Management & Costing	2	3	75	2	1		3	X			
	SAE431	Geotechnics	3	5	125	2	2		4		X		
	SAE412	Building Regulations & Rating Systems	3	5	125	2	2		4		X		
	SAES11	Introduction to architectural design and graphics	5	8	200	3	--	5	8			X	
	SAES21	Introduction to Environmental Sustainable Design	3	4	100	2		3	5			X	
	SAES12	Architecture Surveying	2	4	100	1	1	2	4			X	
	SAES31	Sustainable Tectonics (1)	3	5	125	2		3	5			X	
	SAE432	Sustainable Tectonics (2)	3	4	100	2		3	5			X	
	SAES13	Sustainable Architecture style, time, & place (1)	2	3	75	2			2			X	
	SAE421	Eco Design (1)	4	7	175	2		6	8			X	
	SAE433	Architectural design of Elements	3	5	125	2	2		4			X	
	SAE411	Digital Representation tools in Architecture	2	3	75	1		3	4			X	
	SAE441	Environmental Control Systems (1)	2	3	75	2	1		3			X	
	SAE422	Eco Design for occupant wellbeing (2)	4	7	175	2		6	8			X	
	SAE413	Sustainable Architecture style, time, & place (2)	2	3	75	2			2			X	
	SAE423	Urban Sustainability and Climate Change	3	4	100	2		3	5			X	
	SAE434	Sustainable Tectonics (3)	3	4	100	2		3	5			X	
	SAE531	Sustainable Tectonics (4)	3	4	100	2		3	5			X	
	SAE521	Eco Design for Zero Energy & Passive Building (3)	4	7	175	2		6	8			X	
	SAE543	Environmental Control Systems (2)	2	3	75	2	1		3			X	
	SAE532	Sustainable Tectonics (5)	3	4	100	2		3	5			X	
	SAE522	Eco Design Parametric and High-tech (4)	4	7	175	2		6	8			X	
	SAE621	Eco Design Detailing Adaptive Reuse (5)	4	7	175	2		6	8			X	
	SAE551	New technologies and Sustainable Architecture Future	2	3	75	2			2				X
	SAE542	Daylighting	3	5	125	2	1	1	4				X
	SAE552	Building Information Modelling	2	3	75	1	2		3				X
	SAE553	Integrated Building Design	3	5	125	2	2		4				X
	SAE544	Modelling & Simulation for Sustainable Architecture	3	5	125	2		3	5				X
	SAE691	Graduation Research Project	4	6	150				0				X
	SAE692	Graduation Design Project	10	18	450	2		8	10				X
	SAE622	Environmental Interior Design & Refurbishment	3	4	100	2	2		4				X
	SAE623	Life Cycle and Supply Chain Environmental Assessment	3	4	100	2	2		4				X
	SAE641	Introduction to Renewable Energy Systems	3	4	100	2	2		4				X
	SAE642	Complex Building Energy Modelling	3	4	100	2	2		4				X
	SAE643	Energy Systems	3	5	125	2	2	1	5				X
	SAE644	Energy management and controls	3	5	125	2	2		4				X
	SAE645	Solar Energy	3	5	125	2	2	1	5				X
	SAE646	Building Services and Operations	3	5	125	2	2		4				X
	SAE624	Sustainable Landscapes	3	4	100	2	2		4				X
	SAE625	Environmental Sustainability	3	4	100	2	2		4				X
	SAE626	Partnerships for Sustainable Futures	3	4	100	2	2		4				X
	SAE627	Water and Waste Sustainable Management	3	4	100	2	2		4				X
ESBD Minor	SAEM11	Introduction to architectural design and graphics	5	9	225	3	--	5	8				X
	SAEM12	Digital Representation tools in Architecture	2	3	75	1		3	4				X
	SAEM13	Architecture Surveying	2	4	100	1	1	2	4				X
	SAEM31	Sustainable Tectonics (1)	3	5	125	2		3	5				X
	SAEM14	Sustainable Architecture style, time, & place (2)	2	3	75	2			2				X
	SAEM21	Eco Design (1)	4	7	175	2		6	8				X

C. Module Contents

University requirements
Faculty requirements
Discipline requirements
Program requirements

Level S

Semester 1	SAES11 Introduction to Architectural Design and Graphics	ENGS011 Material Science	BSCS015 Mathematics 1	- FR Elective Pool 2	BSCS016 Selected Topics in Contemporary Issues	LNGS017 English for academic purposes
Semester 2	SAES13 Sustainable Architecture Style, Time, & Place (1)	SAES21 Introduction to Environmental Sustainable Design	SAES31 Sustainable Tectonics (1)	SAES12 Architecture Surveying	- FR Elective Pool 1	- FR Elective Pool 2	LNGS027 English and academic writing

Level 4

Semester 3	SAE441 Environmental Control Systems (1)	SAE422 Eco Design (1)	SAE432 Sustainable Tectonics (2)	SAE433 Architectural Design of Elements	SAE414 Digital Representation Tools in Architecture	- FR Elective Pool 1	LNG4017 Technical report writing and communication
Semester 4	SAE415 Sustainable Architecture Style, Time, & Place (2)	SAE423 Eco Design for Occupant Wellbeing (2)	SAE434 Sustainable Tectonics (3)	SAE424 Urban Sustainability and Climate Change	- FR Elective Pool 2	- FR Elective Pool 2	IND4xx Industrial training 1

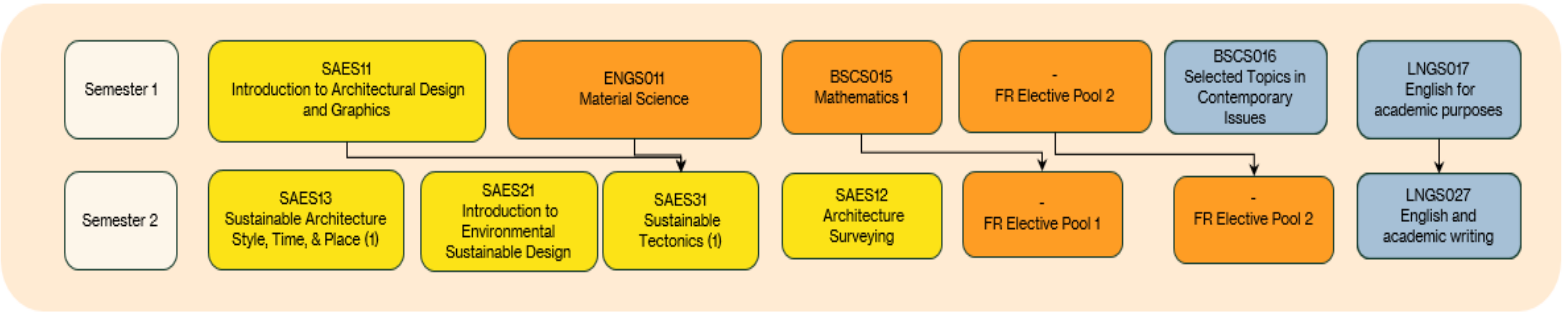
Level 5

Semester 5	SAE551 New Technologies and Sustainable Architecture Future	SAE525 Eco Design for Zero Energy & Passive Building (3)	SAE535 Sustainable Tectonics (4)	SAE542 Daylighting	- FR Elective Pool 3	- FR Elective Pool 3	- FR Elective Pool 1	
Semester 6	SAE543 Environmental Control Systems (2)	SAE526 Eco Design Parametric and High-tech (4)	SAE536 Sustainable Tectonics (5)	SAE552 Building Information Modelling	SAE553 Integrated Building Design	SAE544 Modelling & Simulation for Sustainable Architecture	- UR Elective Pool 1	IND5xx Industrial training2

Level 6

Semester 7	SAE691 Graduation research project	SAE692 Graduation design project	SAE627 Eco Design Detailing Adaptive Reuse (5)	- UR Elective Pool 1	**PR Electives Pool 1(total 2):** SAE622 Environmental Interior Design & Refurbishment SAE623 Life Cycle and Supply Chain Environmental Assessment SAE641 Introduction to Renewable Energy Systems SAE642 Complex Building Energy Modelling	
Semester 8			**PR Electives Pool 2 (total 2):** SAE644 Energy Systems SAE645 Energy management and controls SAE646 Solar Energy SAE647 Building Services and Operations		**PR Electives Pool 3 (total 2):** SAE624 Sustainable Landscapes SAE625 Environmental Sustainability SAE626 Partnerships for Sustainable Futures SAE627 Water and Waste Sustainable Management	

Level S



- University requirements
- Faculty requirements
- Discipline requirements
- Program requirements

Level S

SAES11	Introduction to Architectural Design and Graphics		5
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
3	0	5	
Required SWL	200	Equivalent ECTS	8
Course Content			

- Architectural drawing tools and materials ;
- Principle methods of architectural drawing and representation: orthographic (plan, elevation, section, layout), isometrics and axonometric ;
- Human scale, architectural standards and zoning codes ;
- Integrated design and representation of a simple architectural design. The language inherent in the four disciplines of: art production, art history, art criticism, and aesthetics ;
- Colour theory and movement, and their application in Architectural Design ;
- Observations and drawing of architectural elements and landscapes: line and shape, contour, positive and negative shapes and projections ;
- Tone, texture and colour: colour, tone, scale, form, light and texture ;
- Form and architecture: layering, volume, proportion and area ;

SAES21	Introduction to Environmental Sustainable Design		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	3	
Required SWL	100	Equivalent ECTS	4
Course Content			

- Inspire critical awareness of environmental and sustainable architecture, smart city, its concepts, language and representation.
- Introduction to climate, units of heat and energy; temperature, sensible and latent heat capacity.
- Introduction to the principles of sustainability.
- Economy of Resources Principle: Energy Conservation; Water Conservation; Materials Conservation.
- Life Cycle Design Principle: Pre-Building Phase; Building Phase; Post-Building Phase.
- Humane Design Principle: Preservation for Natural Conditions; Urban Design and Site Planning; Design for Human Comfort (thermal, visual and acoustics comfort).

Level S

SAES12	Architecture Surveying		2
Prerequisites	SAES11		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
1	1	2	
Required SWL	100	Equivalent ECTS	4
Course Content			
• Maps and plans • Linear, area, and volume measurements and calculation. • Levels, levelling and adjustment of level loops . • Detailed survey.			

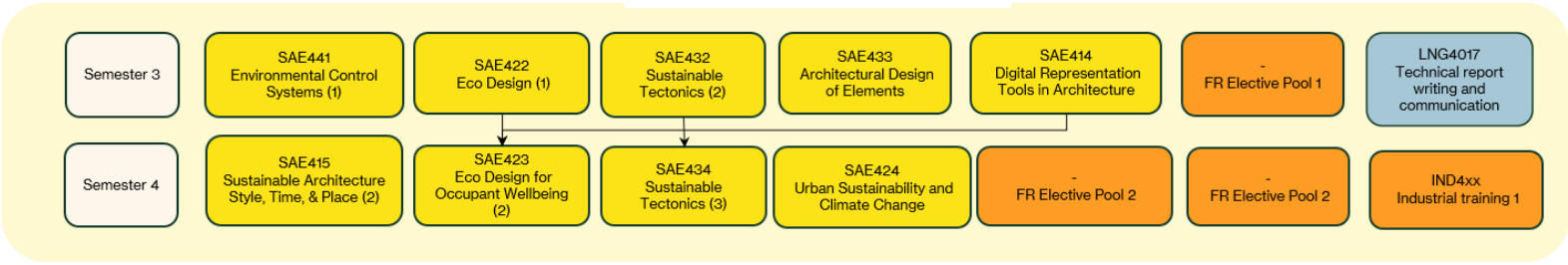
SAES31	Sustainable Tectonics (1)		3
Prerequisites	ENGS31		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	3	
Required SWL	125	Equivalent ECTS	5
Course Content			
• Introduction to the technology, materials and techniques used in constructing buildings • Historical overview of traditional Sustainable construction methods and sequences ; • Basic building elements: foundations, walls, columns, girders, slabs, openings, floors, roofs, stairs and lifts, finishing work, and building services; • Interior & exterior enclosure systems ; • Basic understanding of the qualitative behavior of structures and the interaction between structural form and the loads that they have to carry. • Types of structural systems of low-rise buildings ; • Construction types, procedures, and techniques of low-rise buildings ; • Construction procedures and elements of masonry and timber structures ; • Health and safety procedures in construction sites.			

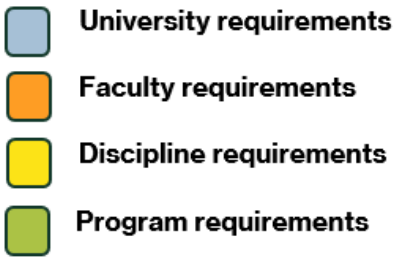
Level S

SAES13	Sustainable Architecture style, time, & place (1)		2
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	0	
Required SWL	75	Equivalent ECTS	3
Course Content			

- This module offers you an A two-hour weekly lecture aims to familiarize you with major architectural.
- Introduction to the history of architecture from ancient times to the present day.
- Surveying the history of architecture and urbanism from the architecture and design traditions of early civilizations to the medieval periods .
- Middle East, Europe, South Asia, East Asia, South America and the Pacific
- Emphasis on significant developments in the ancient Egyptian, classical, byzantine, medieval periods. typologies and the social and technological changes that brought them into being
- In the context of social, technical and environmental settings :
- Form (functional and aesthetic elements), spatial grammar, structural approaches, function and social role.
- Analyze the values reflected in vernacular buildings (housing), religious institutions (churches, temples), and the power of ruling institutions (state, city, palace and empire).

Level 4


Semester 3
SAE441 Environmental Control Systems (1)
SAE422 Eco Design (1)
SAE432 Sustainable Tectonics (2)
SAE433 Architectural Design of Elements
SAE414 Digital Representation Tools in Architecture
- FR Elective Pool 1
LNG4017 Technical report writing and communication
Semester 4
SAE415 Sustainable Architecture Style, Time, & Place (2)
SAE423 Eco Design for Occupant Wellbeing (2)
SAE434 Sustainable Tectonics (3)
SAE424 Urban Sustainability and Climate Change
- FR Elective Pool 2
- FR Elective Pool 2
IND4xx Industrial training 1


University requirements
Faculty requirements
Discipline requirements
Program requirements

Level 4

SAE431	Geotechnics		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	125	Equivalent ECTS	5
Course Content			

- Introduction to the geology and geomaterials of Egypt and the UK;
- Nature of soils and their variability; and the state and behaviour of a soil.
- Basic engineering properties of soils and rock masses and their classifications;
- Vertical stress and shear strength of soils,
- Flow of water through soils;
- Introduction to consolidation theory;
- Common ground engineering problems, techniques and technologies for soil improvement.

SAE412	Building Regulations & Rating Systems		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	125	Equivalent ECTS	5
Course Content			

- Urban strategies, policies, programs, and planning approaches.
- Land management, types, and infrastructure facilities .
- Introduction to standard forms of contract and ownership key challenges.
- Strategic urban plans for small and large cities in Egypt.
- Strategic development plans for greater Cairo region, etc.
- Achieving sustainable urban development priorities .
- Egyptian building law.
- High-Performance Green Building (green technology, processes and principles)
- Green Pyramid Rating System and International Green Construction Code.
- Sustainable Design Certificate Program (LEED)
- Ecological design practices and rating systems worldwide and locally.
- Sustainable building materials and practices, Low carbon buildings .
- Economy of resources and life cycle design .
- Water and waste management and engineering.

Level 4

SAE432	Sustainable Tectonics (2)		3
Prerequisites	SAES31		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	3	
Required SWL	100	Equivalent ECTS	4
Course Content			

- Green buildings materials and finishing materials properties and economics .
- Types of structural and roofing systems of medium-scale buildings ;
- Construction types and techniques of medium-scale buildings ;
- Construction procedure & elements of reinforced concrete and green buildings ;
- Working drawings of concrete structures and building services ;
- Health and safety procedures in construction sites.
- Doors, windows and finishing: types, construction techniques and schedules ;
- Plumbing, HVAC, firefighting, and electrical systems ;
- Water effect on materials, insulation and water proofing;

SAE421	Eco Design (1)		4
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	6	
Required SWL	175	Equivalent ECTS	7
Course Content			

- This studio-based module focuses on developing student practical architectural design skills and exploring the relevance of related subjects, such as structure and construction.
- The emphasis is given to the 'craftsmanship of architecture', improving the spatial, aesthetic, and sensual, as well as practical, structural and dimensional qualities of design.
- Theory of architecture: design methodology and strategic thinking ;
- How to develop design concepts and to select a suitable approach in solving design problems and overcoming constrains.
- How to translate an abstract idea into a form with a positive physical presence. The units are organized into five thematic blocks:
  - Urban Settings
  - Making Processes
  - Context
  - Poetic Narratives
  - Sustainable Communities

Level 4

SAE433	Architectural design of Elements		3
Prerequisites	ENGS13		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	125	Equivalent ECTS	5
Course Content			

- Design principles of the design of concrete and steel structures;
- Design loads and load distribution, and statistically determined structures;
- Reinforced Concrete: fundamentals of reinforced concrete structures, analysis and design of sections subjected to bending, reinforcement details of beams, solid slabs, columns, stairs, ribbed and hollow slabs, paneled beam slabs, connections of precast concrete structural elements;
- Steel Structure: design of members subjected to axial forces, flexural or shear, design bolted and welded connections, details of connections.

SAE411	Digital Representation tools in Architecture		2
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
1	0	3	
Required SWL	75	Equivalent ECTS	3
Course Content			

- Introduction to AutoCAD Software: Theory of CAD; 2D construction and editing commands; Drawing 2D shapes, modifying 2D objects; Transformation concepts; CAD Layers; Rendering 2D drawings; Creating reference objects; Multiple linked drawings management; CAD and the Internet; model space and paper space plotting using templates.
- 3D CAD Modelling theory ; Digital Architecture; three-dimensional coordinates; wire frame; user coordinate system (UCS); model space view ports; 3D surface modelling techniques; solid model construction and features; editing three-dimensional objects; presentation graphics and rendering; CAD and the Internet; model space and paper space plotting.
- Raster graphics editor: draw lines with simulated brushes, fill a region with colours/textures, select a colour using different colour models, remove imperfections, use layers, apply filters, and convert between various image formats.

Level 4

SAE441	Environmental Control Systems (1)		2
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	1	0	
Required SWL	75	Equivalent ECTS	3
Course Content			

- Introduction to the environmental services systems
- Climatic classifications: Examples of Egypt and UK's climate ;
- Climatic control, thermal performance, energy conscious design, and their relation to architectural features (windows, doors, materials, etc)
- The influence of energy source, climate, heating, cooling, lighting, acoustics, and water and waste systems on design of buildings and sites ;
- Environmental indicators and thermal comfort criteria and indices ;
- Natural ventilation and air flow inside and around buildings ;
- Heat transfer, storage and insulation ;
- Mechanical means to manipulate thermal environment; Natural lighting, luminance design, artificial lighting mechanisms, and energy ;
- Computer aided design and applications.

SAE422	Eco Design for occupant wellbeing (2)		4
Prerequisites	SAE421 & SAE411		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	6	
Required SWL	175	Equivalent ECTS	7
Course Content			

- In this studio-based module will study the concepts behind the active and passive systems used to provide healthy, comfortable conditions for building occupants.
- Students will be developing a project employing design strategies based on the information obtainable by sensory devices.
- Environmental and behavioral data collection by sensory devices distributed in buildings and public spaces.
- How climatic conditions data influence the built environment to turn into design intelligence and tap into dynamic architectural projects.

Level 4

SAE413	Sustainable Architecture style, time, & place (2)			2
Prerequisites	SAES13			
Number of weekly Contact Hours				
Lecture		Tutorial		Laboratory
2		0		0
Required SWL	75	Equivalent ECTS		3
Course Content				

- Introduction to the contribution of architectural theory to an understanding of the phenomenon and practice of sustainability and environmental design throughout history. With emphasis on significant developments in Islamic Architecture (ventilation, lighting, functionality, etc)
- Exploring the building traditions of Islamic architecture, Urban planning origins in Islamic urbanization on a wide Geographical scale (ex: Umayyad Arch. Spain & North Africa, Indo-Islamic architecture), exploring the environmental reflections, and highlighting the social & religion factors.
- Studding the vocabulary, elements of landscape, and the building types in Islamic architecture: Different functions: Islamic House, Palaces, Citadels, Fortifications, public buildings …etc

SAE434	Sustainable Tectonics (3)			3
Prerequisites	SAE432			
Number of weekly Contact Hours				
Lecture		Tutorial		Laboratory
2		0		3
Required SWL	100	Equivalent ECTS		4
Course Content				

- Design parameters, construction methods and management implications of environmental sustainable buildings .

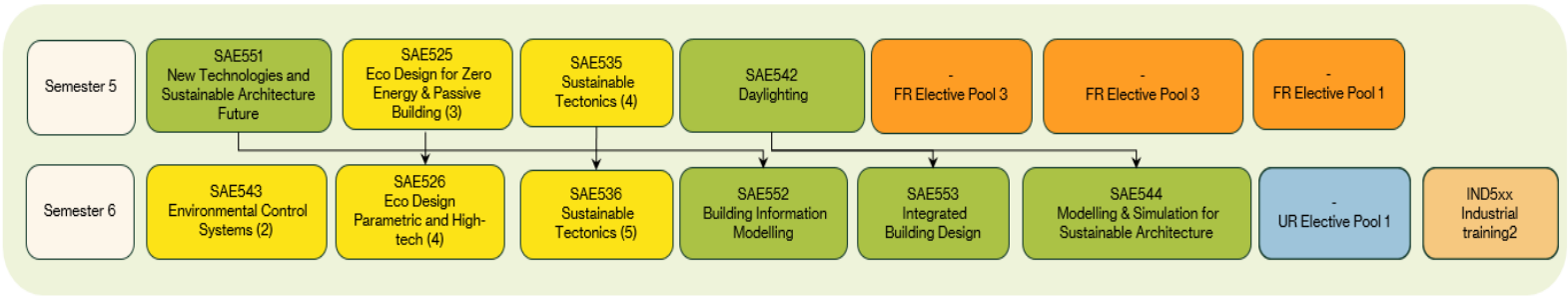
- Types of structural systems of high-rise and long-span buildings.
- Construction types and techniques of high-rise and long-span buildings.
- Construction procedure and elements of steel and precast framed buildings.
- Movement, tolerances and fit: manufacturing, positioning and tolerances.
- Choice of appropriate frames, service and access cores .
- Working drawings of steel and precast framed structures .
- Sections & Elevations (including external and internal finishing materials)
- Life cycle and supply chain environmental assessment.
- Health and safety procedures in construction sites.

Level 4

SAE423	Urban Sustainability and Climate Change		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	3	
Required SWL	100	Equivalent ECTS	4
Course Content			

- In this studio-based module will be introduced to site planning and design principles, elements, and processes; Image of place; Urban Character; Urban fabric; Urban spaces ;
- the key factors contributing to changes to natural and built environments, and their centrality to urban planning activities.
- the complex interrelationship between environmental processes, climate change, urban change, sustainability goals and urban planning policies.
- Theories of urban and landscape design, including: walkable and new urbanism;
- Current urban planning issues including sustainability, climate change, resilience, and vulnerability will be critically analyzed and applied to current and future problems.
- Local and global examples will be drawn upon. This approach will equip students with the capability to propose urban planning solutions to address climate change and facilitate urban sustainability.

Level 5



- University requirements
- Faculty requirements
- Discipline requirements
- Program requirements

Level 5

SAE523	Energy and human development		2
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	0	
Required SWL	75	Equivalent ECTS	3
Course Content			

- Engineering and technology in society;
- The engineering profession;
- Energy engineering;
- The engineer as a problem solver presented through consideration of specific topics such as: safety requirements, energy and the environment, service failure of systems and components, low cost automation, development of industry and energy in Europe and the Middle East with Special reference to Egypt and UK and power generation.

SAE611	Sustainable Project Management and Costing		2
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	1	0	
Required SWL	75	Equivalent ECTS	3
Course Content			

- Preparing project bids and proposals
- Negotiating contracts
- Project planning and initiation
- Scheduling construction
- Estimating, budgeting and cost control
- Project organization and control
- Construction project execution
- BIM and electronic information exchange
- Green building and sustainable construction
- Life cycle and supply chain sustainability assessment
- Managing human factors

Level 5

SAE531	Sustainable Tectonics (4)		3
Prerequisites	SAE434		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	3	
Required SWL	100	Equivalent ECTS	4
Course Content			

- Advanced Construction Technology: Innovative use of manufacturing techniques in construction: e.g. offsite production; robotics in construction; freeform construction;
- Advanced Envelope Technology: e.g. planar glazing; intelligent facades; fabric roofs;
- Advanced Construction Techniques: e.g. working on congested sites; top-down basement construction; retained facades; air-tight buildings; tall buildings; sustainability;
- Review of recent major construction projects. Advanced Construction Management: e.g. innovation; logistics; interface management, safety

SAE521	Eco Design for Zero Energy & Passive Building (3)		4
Prerequisites	SAE422		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	6	
Required SWL	175	Equivalent ECTS	7
Course Content			

- In this studio-based module will be introduced to Reduce energy use and transitioning towards zero greenhouse emissions in the built environment.
- The concepts behind the active and passive systems for decreasing energy consumption .
- Analyses, quantify, visualize and improve the energy performance of buildings, neighborhoods and cities, at different scales of the built environment, towards zero greenhouse gas emissions.

Level 5

SAE543	Environmental Control Systems (2)		2
Prerequisites	SAE441		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	1	0	
Required SWL	75	Equivalent ECTS	3
Course Content			

- Introducing to large scale building services
- Implications of acoustics, water and waste for architectural design;
- Comfort and noise indices ;
- Nature of Acoustics, weighted pressure levels, sound analysis ;
- Acoustics design and noise control ;
- Introduction to water and waste management and engineering ;
- Hydraulic Services: hot and cold water services, solar heating and cooling, water dESBlination and pumping ;
- Sanitation Services: function and operation, fluid flow in waste systems, types of systems, soil pipes, discharge stacks, water treatment and reuse ;
- Other Services: electrical supply, acoustics and distribution; gas supply; firefighting; and solid waste sorting/disposal/recycling/reuse ;
- Costs, maintenance, and integrated building design.

SAE532	Sustainable Tectonics (5)		3
Prerequisites	SAE531		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	3	
Required SWL	100	Equivalent ECTS	4
Course Content			

- Introduction to the latest international developments in prefabrication and its application within construction.
- How prefabrication can be used to minimize or avoid many of the issues currently faced by the construction industry as well as the environmental, financial and social benefits that are possible.
- The challenges and benefits of prefabrication in construction will be demonstrated through a series of case studies and site visits .
- The use of prefabrication in construction at various scales and levels of complexity, including an in-depth look at a range of componentized, panelized and modular construction systems.

Level 5

SAE522	Eco Design Parametric and High-tech (4)			4
Prerequisites	SAE521			
Number of weekly Contact Hours				
Lecture		Tutorial		Laboratory
2		0		6
Required SWL	175	Equivalent ECTS		7
Course Content				

- In this studio-based module focuses on the interaction between users and the built environment.
- Integrated computational design approach to architecture, stemming from both a form generation perspective and performance-based evaluation perspective.
- How Digital technology changes the ways we create and use space.
- Introducing computational methods, including parametric modeling, simulation and analysis – including the possibility of applying digital fabrication, physical computing and advanced kinetic mechanisms – to detailed building model elements .
- The emphasis is on the correlation between architectural design, computational techniques and mechatronics .
- the automated procedures of creating spatial change (using sensor/actuator technologies)

- Design intelligence and dynamic architectural project. Throughout the semester, students will be developing a project employing design strategies based on the information obtainable by sensory devices.

SAE551	New technologies and Sustainable Architecture Future			2
Prerequisites	N/A			
Number of weekly Contact Hours				
Lecture		Tutorial		Laboratory
2		0		0
Required SWL	75	Equivalent ECTS		3
Course Content				

- This Module explores contemporary architecture in relation to major social, economic, political, ecological, and technological transformations after the Second World War.

- A wide range of topics including consumerism, globalization, mass media, cultural identities and changing economic structures are discussed in terms of their role in shaping architectural theory, practice, and built environment .
- Exploring the modern architecture and international schools of architecture during the late nineteenth and twentieth centuries. Including: the origins and development of modernism; changing ideas of housing, urbanism and society; functionalism and expression; materiality.
- The study will reach the contemporary architectural trends, moving from: Post-modernism, Deconstruction, Digital Architecture, Green Architecture,

Level 5

SAE542	Daylighting			3
Prerequisites	N/A			
Number of weekly Contact Hours				
Lecture		Tutorial	Laboratory	
2		1	2	
Required SWL	125	Equivalent ECTS	5	
Course Content				

- Understand the principles and practices of introducing natural light into the building interiors.
- Check if the window sizes in each room for a given project conform to the minimum requirements of the National/international Building Code.
- Calculate the level of natural illumination in each room for a given project using the Average DaylightFactor (ADF) Calculation Method.
- Calculate the area of the skylight for sufficient daylighting.
- Layout the skylight on the floor plan and the roof plan using the perpendicular and parallel configurations.
- Calculate the length and height of a clerestory window for sufficient daylighting.
- Using reliable software to design daylighting

SAE552	Building Information Modelling			2
Prerequisites	N/A			
Number of weekly Contact Hours				
Lecture		Tutorial	Laboratory	
1		2	0	
Required SWL	75	Equivalent ECTS	3	
Course Content				

- Evolution of architectural representation: from CAD to BIM platform ;
- BIM, definition and terms ;
- BIM tools in design, parametric modeling, attribute and relationships ;
- Design and construction process for BIM and interoperability ;
- BIM strategies: the building project execution plan ;
- Team working strategies and multidisciplinary collaboration ;
- application with BIM tools; software will be used for 3D models checking and detecting clashes in 3D models, following by developing a 4D model (construction sequencing) and finally developing 5D model (quantity extraction) of the project.

Level 5

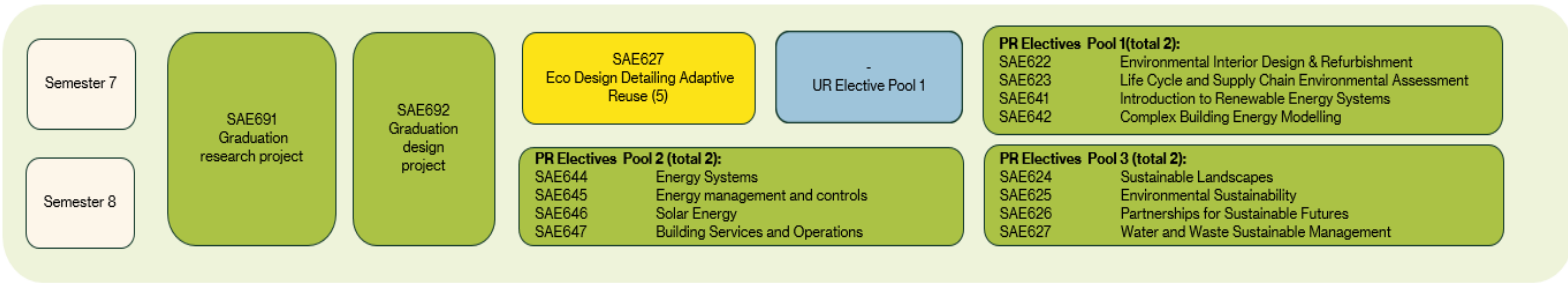
SAE553	Integrated Building Design			3
Prerequisites	N/A			
Number of weekly Contact Hours				
Lecture		Tutorial		Laboratory
2		2		0
Required SWL	125	Equivalent ECTS		5
Course Content				

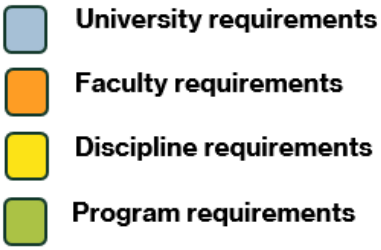
- Develop a fully integrated concept design for a building, starting from the briefing and master planning stage ;
- The identification of appropriate environmental strategies for integration within the context of an overall building design and practice the development of these ideas from scheme design to detailed design stage
- The concept design will be developed to detailed design, including: choice of appropriate materials, buildings services, partition systems, raised floors and suspended ceiling, fittings, finishes, etc ;
- The work will be carried out on project to focus on producing a full set of working and selective workshop drawings for technical building system details.

SAE544	Modelling & Simulation for Sustainable Architecture			3
Prerequisites	BSC513 & ENG522			
Number of weekly Contact Hours				
Lecture		Tutorial		Laboratory
2		0		3
Required SWL	125	Equivalent ECTS		5
Course Content				

- Introduction of the role of modelling and simulation to study sustainable architecture: governing equations; formulation, discretization, loads, boundary and initial conditions, limitations/capabilities, and computational errors ;
- Introduction of state-of-the-art computer simulation methods for ventilation (CFD), thermal/energy/renewable energy analysis, and daylighting ;
- Hands-on practical problems on real-life case studies using commercial software

Level 6


Semester 7
Semester 8
SAE691 Graduation research project
SAE692 Graduation design project
SAE627 Eco Design Detailing Adaptive Reuse (5)
- UR Elective Pool 1
PR Electives Pool 1(total 2):
SAE622 Environmental Interior Design & Refurbishment
SAE623 Life Cycle and Supply Chain Environmental Assessment
SAE641 Introduction to Renewable Energy Systems
SAE642 Complex Building Energy Modelling
PR Electives Pool 2 (total 2):
SAE644 Energy Systems
SAE645 Energy management and controls
SAE646 Solar Energy
SAE647 Building Services and Operations
PR Electives Pool 3 (total 2):
SAE624 Sustainable Landscapes
SAE625 Environmental Sustainability
SAE626 Partnerships for Sustainable Futures
SAE627 Water and Waste Sustainable Management


University requirements
Faculty requirements
Discipline requirements
Program requirements

Level 6

SAE621	Eco Design Detailing Adaptive Reuse (5)		4
Prerequisites	SAE522		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	6	
Required SWL	175	Equivalent ECTS	7
Course Content			

- This studio-based module focuses on the technological design, performance requirements, procurement, manufacturing and construction of building envelope systems and materials.
- facades and roofing systems from start to finish of the building process, the subject gives insight on the specificity of the facade construction industry as a key agent of the design and delivery of contemporary projects.
- adaptive reuse Approach, including extensive refurbishments and facade treatments, while respecting the history and heritage of the site.
- The properties and behavior of materials commonly used in building envelopes (e.g. glass, metals, insulation, sealants) and the fitness for purpose of different façade and roofing configurations, systems and products.

SAE691	Graduation Research Project		4
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
0	0	0	
Required SWL	150	Equivalent ECTS	6
Course Content			

- As defined by an agreed Project Definition Document, and reflecting knowledge gained in the previous academic years of the BSc program.
- The topic of choice for the research dissertation could be in any area that is related to Environmental Sustainable architectural studies.
- The research will normally involve a mixture of experimental, theoretical, and computational work together with a relevant literature review.

Level 6

SAE692	Graduation Design Project		10
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	0	8	
Required SWL	450	Equivalent ECTS	18
Course Content			

- The final design project of the program, focuses on the detailed design of a significant new piece of architecture that responds to sustainable development objectives and the environmental, social and built context.
- The principles of architectural sustainability within the broader cultural context and theoretical discourse.
- This will be specified by the project supervisor.

SAE622	Environmental Interior Design & Refurbishment		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	100	Equivalent ECTS	4
Course Content			

- This studio-based module focuses on technical skills that learners apply to their own design projects relating to design for climate; they analyse and draw re-furbished buildings and they creatively detail their own interior design project (in drawing and model)
- An introduction to the theories of interior design in architecture
- Site visits; physical prototyping with real materials; live case study analysis; modelling and drawing characterise this enjoyable and accessible module, which brings the craft of interior refurbishment to life .
- Principles of interior lighting design.

Level 6

SAE623	Life Cycle and Supply Chain Environmental Assessment		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	100	Equivalent ECTS	4
Course Content			

- Holistic view of engineering the entire life cycle of a product or service from raw material extraction, production, usage to disposal.
- Sustainable development and life cycle thinking .
- Life cycle analysis tools ,
- Eco-design and cleaner production, and closed-loop economy .
- Product life cycle management, life cycle assessment, sustainable manufacturing, circular economy. etc. Hands-on, in-depth understanding of LCA frameworks, principles, tools, and applications of life cycle assessment.
- State of life cycle practice and current initiatives. Guest speakers are also invited to provide broader examples from a global perspective.

SAE641	Introduction to Renewable Energy Systems		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	100	Equivalent ECTS	4
Course Content			

- The science, technology and policy instruments of a broad range of renewable energy technologies including solar, wind and water as well as other thermal renewables. Specifically, the subject covers:
- Solar: Overview of the fundamental physics of solar radiation; Technical details of photovoltaic cells and concentrating solar power systems
- Wind and water: Overview of the fundamental physics of motion involved in energy in wind & water; Technical details of wind turbines and hydro-power systems, including pumped Hydro-Energy Storage
- Other thermal renewables: Overview of the chemistry and technologies for biomass for heat and electricity and liquid biofuels
- Renewable integration and policy: Overview of renewable energy policy considerations; Understanding challenges of integration of renewables into power systems. This includes managing variability and the opportunities provided by storage and demand-side management.

Level 6

SAE642	Complex Building Energy Modelling		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	100	Equivalent ECTS	4
Course Content			

- The subject teaches how to use two modelling approaches to investigate and communicate complex and innovative environmental solutions for energy efficient building design. Led by experienced software users from industry and from software manufactures, this course will allow students to specialise in a software tool which they may already be using at their work.
- Based on a case study approach students will assess an existing or new building project and prepare the documentation arguing for the innovative approaches to energy efficiency that are proposed. Focus will not only be on learning how to model these complex scenarios, but also how to interpret their practicality and develop risk profiles allowing end users to be able to choose between innovation and benefit.
- This subject will involve Virtual Environment.

SAE643	Energy Systems		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	1	
Required SWL	125	Equivalent ECTS	5
Course Content			

- In relation to sustainable engineering, you'll develop a deep understanding of the principles that govern building services thermal energy systems and renewable and Low or Zero Carbon technologies
- Topics such as passive solar heating, photovoltaics, solar water heating and co-generation are examined, as well as costs and economic analysis;
- Design of hybrid (renewable) energy systems and smart grids.

Level 6

SAE644	Energy management and controls		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	125	Equivalent ECTS	5

Course Content

- The fundamental principles that determine the efficiency with which energy can be harvested, stored, produced, transmitted or consumed .
- The environmental impacts of the production and consumption of energy are less fully understood and have to be balanced against the availability of key resources, the cost of managing those resources, the efficiency with which they may be utilised and the political and ethical consequences of obtaining them.
- A quantitative survey of the chemistry and physics behind conventional and alternative energy sources, including fossil fuels, bio-fuels, the capture of energy from solar, geothermal, hydro and wind sources and their storage, and the generation of energy from nuclear fission and fusion processes. Each energy source is assessed in terms of its environmental impacts, its dependence on critical or scarce resources and the social or political consequences of reliance on that energy source with respect to long-term sustainability.
- This module examines the controls and processes that are necessary for efficient and effective operation of buildings and their engineering services. It provides an understanding of control elements and building energy management systems, and the way that information from these systems can be used to manage energy. The module also presents tools for financial analysis and reporting.

SAE646	Building Services and Operations		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	125	Equivalent ECTS	5

Course Content

- Introduction on environmental quality and energy related issues.
- The integration of services and energy efficient strategies into the fabric of the building and its construction process.
- The subject provides students with knowledge in the field of electrical, mechanical, air handling, hydraulic and communication services and particularly the construction issues they generate: levels of documentation and decision-making required; connections with process planning; spatial requirements for functioning, installation and access purposes; protection and quality assurance; building tolerances; systems integration; layout strategies; work sequences and temporary works; contract coordination; testing; maintenance; and upgrading-replacement.

Level 6

SAE645	Solar Energy		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	1	
Required SWL	125	Equivalent ECTS	5
Course Content			

- Introduction to Solar Energy in the energy economy; Fundamental heat & mass transfer; Radiation properties of materials; and selective surfaces
- Solar Geometry and solar angles; atmospheric effects and radiation prediction; and Solar radiation measurement
- Flat plate collectors design and performance characteristic
- Concentrating collectors design and performance characteristic; Evacuated tube collectors
- Solar System design methods
- Fundamentals of photovoltaic systems
- Solar process heating
- Solar drying, Solar cookers, Green houses and Solar stills
- Solar water pumping; Solar refrigeration
- Built environment applications passive and active systems
- Solar hot water and solar heat pump systems.

SAE624	Sustainable Landscapes		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	100	Equivalent ECTS	4
Course Content			

- The meaning and significance of sustainability in the context of urban, urban fringe, rural, and regional landscapes and their futures;
- Rural and urban land use, and drivers of current and future landscape change, including fragmentation, social change and transformation, biodiversity loss, industrialisation, intensification, pollution, sovereignty, and security;
- Assumptions around land ownership, ethics and economics that influence issues of environmental security, commons and sustainable regional futures; · the utilisation, degradation, and management of rural and urban biophysical resources for sustainable futures, including maintenance of ecosystem services and processes;
- The involvement of different stakeholders in decision making for regional, service, rural, fringe and urban areas, including the role of relationships and social features such as politics, memory, and values; and
- The role of governance, including institutions, deliberative democracy, empowerment; and community based natural resource management in navigating landscape change.

Level 6

SAE625	Environmental Sustainability		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	100	Equivalent ECTS	4
Course Content			
• The fundamental earth system processes that provide humanity's life-support system; • The conditions that have led to the Anthropocene, and its implications for life as we know it; • Global and local environmental challenges, including for biodiversity, water, energy, and food, in relation their natural and social environments; • Complex social-ecological systems and their role in contributing to and solving critical environmental sustainability issues; • Different perspectives, and the influence of worldview, values and beliefs on sustainability; • The role of individuals, governments, business and innovation in building a sustainable future; and • Management, governance, and social-ecological issues for achieving environmental sustainability.			

SAE626	Partnerships for Sustainable Futures		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	100	Equivalent ECTS	4
Course Content			
• Kinds of important partnerships in integrating environmental expertise and applying it to decision-making and action for sustainable futures. • The challenges for environmental professionals in developing such partnerships and collaborating effectively across organisations, sectors, forms of expertise, and communities. • Skills and strategies can assist environmental professionals in developing, leading and maintaining effective partnerships with positive outcomes. • The evaluation and lesson learned from the collaborative processes and			

Level 6

SAE627	Water and Waste Sustainable Management		3
Prerequisites	N/A		
Number of weekly Contact Hours			
Lecture	Tutorial	Laboratory	
2	2	0	
Required SWL	100	Equivalent ECTS	4
Course Content			

- The fundamentals of water quality and the associated standards for use as potable water, recycled water or discharge into the environment in a sustainable manner.
- Risks and measures to control those risks and various treatment processes including physical, chemical and microbiological treatment of water and wastewater.
- Introduce the physical, chemical and biological processes as a foundation to the current water and waste management practices;
- Introduce the main management processes and engineering concerns of water and waste recycling systems;
- Design basic processes Sustainable of water and waste management systems.

D. Grading Systems

The British University in Egypt (BUE) uses a grading system that combines both Egyptian and UK standards. Here are some key points:

1.Grade Point Average (GPA):
BUE uses a GPA system to evaluate students' academic performance. The GPA is calculated on a 4.0 scale, similar to many other universities.

2.Course Assessment:
Students are evaluated based on a combination of attendance, participation, projects, tests, midterm exams, and final exams. Typically, the final grade is a weighted average of these components.

3.Letter Grades:
The percentage marks for each course are converted into letter grades, which then correspond to grade points. For example:

1. A: Excellent
2. B: Very Good
3. C: Good
4. D: Pass
5. F: Fail.

4.Dual Degrees:
Students who complete programs validated by UK partner universities receive two degrees, one from BUE and one from the UK institution. This means they get two sets of award classifications and transcripts.

UK %	Grade
77 and above	A+
74-76	A
70-73	A-
67-69	B+
64-66	B
60-63	B-
57-59	C+
54-56	C
50-53	C-
47-49	D+
44-46	D
40-43	D-
Less than 40	F

A category :

Egyptian Standing	British Mark	Egyptian Mark	Letter Grade
Distinction	99	100	A+
	98	99	
	97	99	
	96	98	
	95	98	
	94	97	
	93	97	
	92	96	
	91	96	
	90	95	
	89	95	
	88	94	
	87	94	
	86	93	
	85	93	
	84	92	
	83	92	
	82	91	
	81	91	
	80	90	
	79	90	
	78	89	
	77	89	
	76	88	A
	75	88	
	74	87	
	73	86	A-
	72	86	
	71	85	
	70	85	

B category :

Very good	69	84	B+
	68	83	
	67	82	
	66	81	B
	65	80	
	64	79	
	63	78	B-
	62	77	
	61	76	
	60	75	

C category :

Good	59	74	C+
	58	73	
	57	72	
	56	71	C
	55	70	
	54	69	
	53	68	C-
	52	67	
	51	66	
	50	65	

D category :

Satisfactory	49	64	D+
	48	62	
	47	60	
	46	59	D
	45	57	
	44	55	
	43	54	D-
	42	53	
	41	51	
	40	50	

F category :

Fail/Weak	39	49	F
	38	48	
	37	46	
	36	45	
	35	44	
	34	43	
	33	41	
	32	40	
	31	39	
	30	38	
	29	36	
	28	35	
	27	34	
	26	33	
	25	31	
	24	30	

E. Summer training internships & Field Trips

At our department, we believe that real-world experience is essential to complement the academic knowledge gained in the classroom. Our Summer Training Internships and Field Trips offer students the chance to apply their learning, gain hands-on experience, and build valuable professional skills in their respective fields. These experiences are designed to help students bridge the gap between theory and practice while giving them a competitive edge in the job market.

Each student in this programme must complete training, office & site training in the summer of year 2 and year 3 as a pass or fail requirement for graduation.

The office placement internship, for all students, requires the attendance of a a whole month working on technical drawings including design drawings , modelling or shop and working drawings. The site placement internship, for all students, requires the attendance of a a whole month working on site and learning about construction methods in real life and gathering information about different materials and their properties. This supports the development and recognition of career management skills through work placements and work experience. This training can be at architectural firms or architectural workshops offered by the department during the summer period.

Summer school in Rome

Spending a summer studying in Rome is a once-in-a-lifetime opportunity to blend academic learning with cultural exploration in one of the most historic and vibrant cities in the world.

The lectures on parametric design simulation, generative forms as well as kinetic responsive design, analyzing and digital fabrication prototyping, are integrated together in 2 main parallel modules. Students from the beginning of the school were divided into groups to compete on a case project increasing their ability to define project parameters, design factors, solving problems, understanding factors relationships, involving environmental and human sensors, and optimizing their projects solutions in a smart and intelligence way.


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للمقاولات والاستثمارات العقارية
HSE
إدارة السلامة و الصحة المهنية







F. Departemantal Policies

Students' Attendance Policy

The University monitors student attendance in accordance with the procedures below, to ensure that it fulfils its obligations and provides appropriate support to students.

- All students are expected to attend and participate in all teaching and learning sessions to benefit fully from their BUE education.
- Students should contact the relevant Teaching Assistant and then Module Leader if they have any concerns about understanding the requirements and/ or content of a particular module.
- Students should contact either their Personal Advisor or the Head of Department and/or the Programme Director if they wish to seek advice regarding their studies.
- Module outlines on e-learning shall specify the core teaching sessions for modules for which student attendance shall be recorded and indicate that nonattendance shall be reported in accordance with paragraph.
- Core teaching sessions shall be determined by Module Leaders in consultation with Heads of Department. For most modules, the core sessions will be tutorials and/or laboratory/practical classes. Lectures will be specified as core sessions for some modules.
- Once a student has missed three core teaching sessions specified for a particular module, Module Leaders shall arrange for a Student Absence flag to be inserted in a student's record on the Student Records System (SRS). This shall lead to the automatic generation of letters to students, copied to their parents (and to the Personal Advisors of Preparatory Year students), informing students that they are deemed "At Risk" of failing the modules concerned due to their poor attendance.

- If students "At Risk" continue not to attend and miss a further three core teaching sessions as specified for a particular module (two core sessions in the case of English modules), Module Leaders shall arrange for a second flag to be inserted on the SRS. This shall lead to the automatic generation of second letters to students, copied to their parents (and to the Personal Advisors of Preparatory Year students), informing students that they are deemed "At Significant Risk" of failing the modules concerned

- due to their continued poor attendance. o Students who have a genuine reason for their absence should use the Student Absence Procedures (as specified in the Student Handbook) to avoid the possibility of receiving "At Risk" letters. Penalties for non- attendance.
- Students who do not fulfil the attendance requirements for a module shall receive letters which highlight the obligations of students regarding their studies and confirm the following:
- That, if students fail modules, they have only a limited number of attempts to pass modules, as specified in the General Academic Regulations (GAR), if they are to meet the GAR requirements for award of a UK Degree.
- That students may be prevented from re-sitting modules during the Summer Assessment Period, depending on the number of credits failed, as specified unfair advantage to any student.

That students who wish to remain on the UK degree will be required to repeat their studies in the following academic year rather than progress, if they do not pass all their modules in a given programme year, provided that they have not exhausted their limited number of attempts in a given module:

- That students who have exhausted their limited number of attempts in each module will be dismissed from the UK degree, in accordance with the GAR; attendance requirements that are consistent with the level and nature of study and with the requirements of dissertations.
- Those students will be dismissed from the BUE if they do not satisfy the regulations for the EG-only Degree. That students who do not satisfy English module attendance requirements will be prevented from taking the unseen examination/final paper for the English modules concerned, subject to approval of the Faculty Council, and that they may be ineligible to re-sit English modules during the Summer Assessment Period, as specified in the GAR.
- That student interim transcript will indicate "At Risk" flags for the module(s) concerned.

Academic Misconduct

It is academic misconduct for any student in the course of any assessment to engage in one or more of the following activities:

- Failing to comply with the Rules for the Conduct of Students in Assessments.
- Failing to comply with the Rules for the Conduct of Students in Examination Halls.
- Assisting another student to gain an advantage by unfair means, or receiving such assistance, for example by collusion, by impersonation or the passing off of one individual's work as another's. This includes undeclared failure to contribute to group coursework assignments.
- Misleading the examiners by the fabrication or falsification of data.
- Plagiarism, which is defined by the University as 'submitting work as the student's own of which the student is not the author'. This includes failure to acknowledge clearly and explicitly the ideas, words or work of another person whether these are published or unpublished.
- Engaging in other activity likely to give an Major Offences shall be considered by the Faculty Academic Misconduct Committee of the student's home Faculty.
- A student shall certify, when submitting work for assessment, that the work is his/her own. unfair advantage to any student.
- Students are referred to the Coursework Submission Statement of (SP) An offence of academic misconduct will be defined as minor or major depending on its seriousness. Minor Offences shall be considered by the Head of Department of the Faculty of the student (the relevant Head of Department). Major Offences shall be considered by the Faculty Academic Misconduct Committee.
- Any decision made in accordance with the regulations on academic misconduct shall not be overturned subsequently by a Programme Examination Board under any circumstances.
- An incident shall be deemed to be a Minor Offence of academic misconduct if it relates to work for assessment not undertaken in an Examination Hall, and if the nature of the incident together with the circumstances of the student make appropriate a relatively limited penalty.
- Except for the Preparatory Year, a student suspected of committing a Minor Offence will automatically be referred for action under the Major Offence procedure if s/he has previously been found guilty of any offence of academic misconduct. In the case of a Preparatory Year student, referral for action under the Major Offence procedure will

- be applied only exceptionally at the discretion of the relevant Dean.
- The relevant Head of Department is empowered to consider charges of Minor Offences against students and to levy penalties.
- An incident shall normally be deemed to be a Major Offence of academic misconduct if it relates to an assessment undertaken in an Examination Hall, or to other assessed work where the nature of the incident together with the circumstances of the student make appropriate a substantial penalty. Except for the Preparatory Year, if a student has been found guilty of a previous offence of academic misconduct, the case shall be designated a Major Offence. In the case of a Preparatory Year student referral for action under the Major Offences procedure will be applied only exceptionally at the discretion of the relevant Dean.
- The Committee shall be appointed by the Dean on an anabasis with the following constitution:
- Three academic faculty members, including Dean, shall act as Chair.
- One member of the BUE Students' Union (SU) Board nominated by SU
- Where requested, one member of any validating institute, except at P level.
- The Registrar has the right to attend the Committee.
- Offences committed in the Preparatory Year are cumulative (i.e., an offence in Semester One will affect the consideration of a further offence during the year – see 14.6) but do not carry into Degree Year 1. In Degree Year 1 and all other year's offences are cumulative.
- A case which appears to academic staff to suggest that a student has committed an act of academic misconduct shall be reported immediately to the Dean, through the Head of Department with a recommendation of whether it constitutes a minor or major offence. The Dean shall consider whether there is a prima facie case to answer. Where the Dean considers the incident to constitute a Major Offence, s/ he shall consult the Registrar. If it is considered the case is a Major Offence, the Dean shall refer the matter to the Faculty Academic Misconduct Committee. If it is considered the case is a Minor Offence, the Dean shall refer the matter to the relevant Head of Department.
- The relevant Head of Department shall decide whether any action shall be taken under the procedures for Minor Offences.
- Where the Registrar has been consulted, s/he shall advise the relevant Dean to refer the case for action under the Major Offences procedure.

- Students shall be notified in writing of alleged Minor Offences by the relevant Head of Department/Dean. Students shall be invited to admit or deny the allegation, Head of Department/Dean. Students shall be invited to admit or deny the allegation, have the right to see the evidence against them and to defend themselves in writing and/or in person, and may be accompanied by an individual of their own choosing. Any written defence or request to be heard in person, including the name and status of any accompanying individual, must be received by the relevant Head of Department within five working days of the notification of the alleged misconduct.
- Having considered the evidence and the defence, if any, the relevant Head of Department shall decide whether the student is guilty of the offence. The student (and Q&V) shall be notified in writing of the relevant Head of Department's decision and of the penalty, if one is to be applied, within ten working days of the student being notified of the allegation.

Internal Transfers

- A student shall be permitted to apply to change his/her programme of study or programme specialism:
- within two weeks from the start of the first registration for the programme or specialism, if approved the student will continue on the new programme.
- prior to the start of the next academic year, if approved the change will be implemented at the start of the next academic year.

Suspension of Study & Re-enrolment

- Students may suspend their studies for the following reasons:
- Medical conditions approved by the BUE Clinic. o Absence or forced travel as approved by the Dean and Faculty Council.
- Military conscription.
- Re-enrolment students must meet the admissions conditions.
- Re-enrolling students will be granted exemption from relevant completed modules if they have achieved a pass grade.

Degree Requirements

- Students are required to pass a total of 600 credit points, which are equivalent to at least 180 credit hours, to be awarded the degree, including the submission of an individual research project and a group design project. Students are required to pass two industrial placements, one month each during the duration of study.

Graduation Projects

- Students are required to submit two graduation projects as follows:
- Individual Research Project.
- Individual Design project.
- Both projects run for the whole final year and are not necessarily interrelated.
- Students should pass at least 460 credit points (138 credit hours) to be eligible for registering in their graduation projects.
- Students should pass at least 20 credit points (6 credit hours) in the area of the selected graduation projects to be eligible to register for their project of choice.

Failure and Number of Attempts

- If a student fails a course s/he has another opportunity to attempt the course in the summer assessment period.
- Students can progress to the following study year with up to 20 trailed credit points (6 credit hours). Students registered for the UK / Egyptian dual award have four attempts to pass any course, a maximum of two years to pass any study year and students who fail to pass any study year after two years will be dismissed from the UK degree track.

Academic Advisor (Personal Advisor)

- All students are allocated a Personal Advisor.
- The Personal Advisor shall review the following issues with their tutees:
- Attendance & Punctuality
- Address any concerns with students & find appropriate solutions.
- Ensure students understand programme & University assessment requirements.
- Review progress & identify any measures that need to be put in place to address underperformance. o Check that students have appropriate exam revision techniques Study Skills. o Ensure students understand the requirement for independent study & student effort.

Student Support (Distinguished, At-Risk and Disabled students)

Distinguished Students:

- The faculty initiated a method of recognition for excelling students which is the Dean's List. This list is a welldefined tool, internationally, for recognizing top students. The list was created and published to all students through the email with details about its definition, function, and benefits. The list is also posted on the announcement board in the main classroom building of the Faculty of Engineering.
- Students on the Dean's List are awarded & recognized in the "Annual Engineering Recognition & Awards Day". To be included on this list, students should satisfy the following:
- 1. Achieve a minimum of 80% UK Scale for the whole year for Prep, YR 1, YR 2 and YR 3 students.
- 2. Achieve a minimum of 90% EGY Scale for the whole year for YR 4 & graduating students.
- It is worth noting that being on the Dean's list will provide students with the following:
- 1. A certificate of recognition awarded in a special celebration day during the Engineering Recognition & Awards Event.
- 2. Eligibility for funding opportunities, if available, to student activities.
- 3. Nomination for international training opportunities, if available.

At-Risk Students :

- Weak students are those who are exhibiting one or more of the following:
- 1. Consistent trend of absences.
- 2. Declining performance as indicated by transcript.
- 3. Consistent large number of failed modules in each semester.
- 4. Low % pass at first attempt (in terms of modules)
- 5. Barely passing overall average.

- The faculty provides support mechanisms when needed, which is summarized as follows:
- 1. Personal tutors to monitor all their tutees, on a semester basis, and identify those who are exhibiting one or more of the above defined indicators.
- 2. A careful review of the student's performance is then conducted using his/her transcript to identify trends.
- 3. The analysis shall result in identifying the status of the student as one of the following:
- Temporary at-risk.
- At-risk student.
- Thread dependant weakness.
- Weak student.
- 4. Student to be called for a meeting with personal tutor to discuss his/her performance and potential actions which shall feed into the next step.

- 5. Personal tutor to design a programme, with clear and specific outcomes and timeline, to support the student, based on his/her status and in collaboration with relevant module leaders.
- 6. Proposed support programmes are presented and discussed in a departmental meeting.
- 7. Proposed support programmes are presented and discussed in a departmental meeting.
- 8. Head of department shall monitor the implementation of such programmes via reports from individual personal tutors.
- 9. Remedial actions to be proposed and implemented to adjust the proposed programme, if required, because of the continuous monitoring.
- 10. A summary of identified cases proposed actions and relevant success indicators are compiled.

- Disabled Students The faculty provides facilities to support disable students.



Quick student's Guide

	Impaired Performance (IP)	Absence Form	Inquiry	Academic Appeal
Why	When you have missed any assessed CW due to Un-Planned circumstances.	When you have missed any Lectures, Tutorials, Labs and assessed CW due to Planned circumstances.	When you are not satisfied regarding a given mark and you feel that your performance in the mentioned component deserves better mark	When you have got refusal on any submissions you did i.e. absence form, IP and you have new grounds for your case that were not submitted before.
How	Follow the link received by Q&V, fill in all required data and submit.	Download the form from BUE website, fill all required information, get it sign from relevant MLs before submission to relevant Department's Admin	Follow the link received by Dean's office, fill in all enquired data and submit.	Follow the link received by Q&V, fill in all required data and submit.
When	Upon Q&V notification that the IP portal via BUE website is launched for Students' submission	Throughout the semester, submission is within 15 days from the return date	After each Semester Results as per Q&V announced timeline	Upon Q&V notification that the Appeal portal via BUE website is launched for Students' submission
Where	Online	Relevant Department Admin	Online	Online

G. Useful Bits and Pieces

Academic staff (Full Time)



Prof. Passaint Massound
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Dr. Rasha Said
Program Director of Sustainable Building Design
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Dr.Randa Samir Swaiha
Assistant Lecturer, English Programme Coordinator & Professional Programme Coordinator

G. Useful Bits and Pieces

Academic staff (Part Time)



Dr. Ali Farag
Global Advisor: Geomechanics
Halliburton – Geoscience and Production



Dr. Soha Elgohary
Cairo university faculty of engineering



Dr.Nihal el sabbagh
Cairo university faculty of engineering



Dr.Nouran El-Baz
BIM Building Information Management



Dr.Moutaz Abdelfatah

G. Useful Bits and Pieces

Academic staff (Teaching Assistants)



Eng. Sherouk Hamdy Seif
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Eng. Dina Rushdy
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Eng. Ahmed Selim
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Eng. Mariam Farouk
Teaching Assistant
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G. Useful Bits and Pieces

Resources and facilities

Laboratories and Workshops

- Cad Lab
- VR Lab
- Workshop
- Lecture Halls
- Classrooms
- Studios

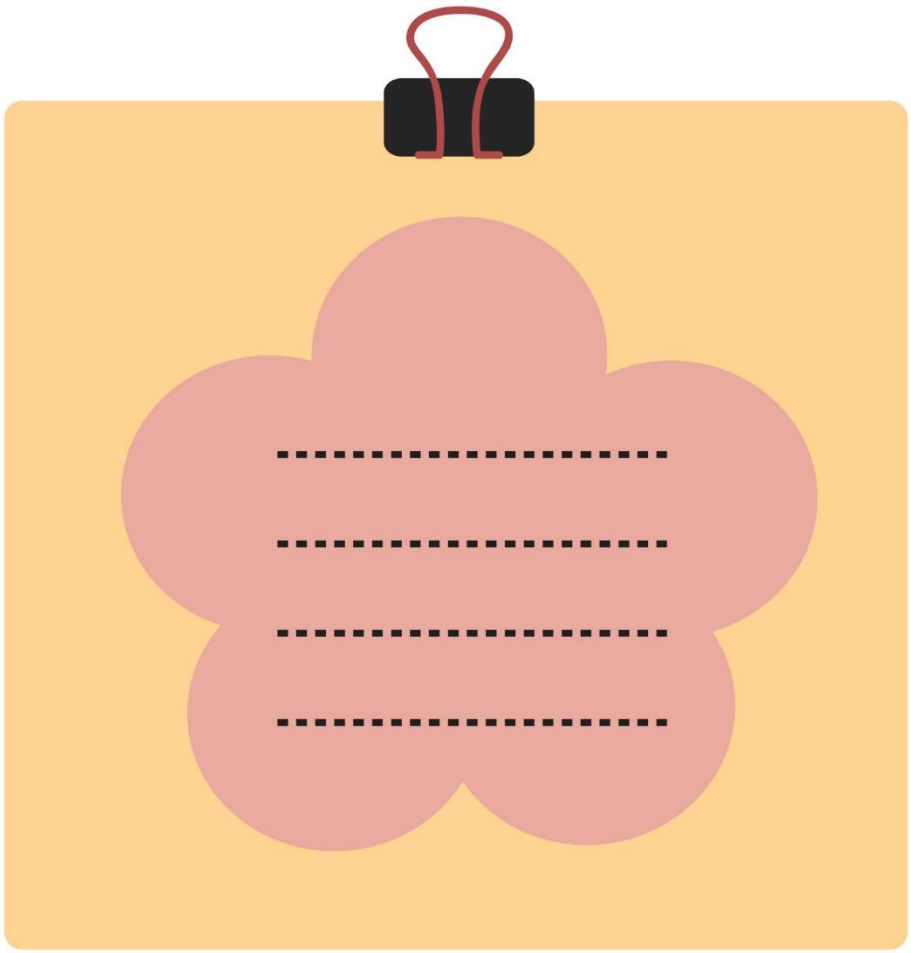
G. Useful Bits and Pieces

Resources and facilities

Library resources and databases

- Scopus
- Science Direct
- Springer
- Ernst & Peter Neufert – Architects Data
- AIA Guidelines
- Egyptian Building Codes

My Notes :



The undergraduates students'

PROGRAM HANDBOOK

For Sustainable Architecture Engineering

The British University in Egypt

September 2024

Program Handbooks are issued and maintained by the Faculty of Energy & Enviromental Engineering

The BRITISH UNIVERSITY IN EGYPT

FACULTY OF ENERGY & ENVIRONMENTAL ENGINEERING

London South Bank University