Gazan University
College : Design and Architecture
Department of Architecture

Course Specifications

Environmental control systems in architecture
1437 -1438 semester 2

Code: 321 ARC-2
Sixth level
Division: 507

Course instructor : Ezzeddine Souabni

هيئة تقويم التعليم
Education Evaluation Commission

Course Specifications

Institution : **Gazan University** Date of Report :**1437 -1438 semester 2**	Institution : **Gazan University** Date of Report :**1437 -1438 semester 2**
College/ **Design and Architecture**	Department / **Architecture**

A. Course Identification and General Information

1. Course title and code: **Environmental control systems in architecture** **321 ARC-2**

2. Credit hours **03 hours / week**

3. Program(s) in which the course is offered.
Architecture

4. Name of faculty member responsible for the course
Ezzeddine Souabni

5. Level/year at which this course is offered **Level 6 – Year 3**

6. Pre-requisites for this course (if any) **Does not exist**

7. Co-requisites for this course (if any) **Does not exist**

8. Location if not on main campus **Jazan University Academic Complex for Girls**

9. Mode of Instruction (mark all that apply):

a. traditional classroom	■	What percentage?	100
b. blended (traditional and online)		What percentage?	
c. e-learning		What percentage?	
d. correspondence		What percentage?	
f. other		What percentage?	

Comments:

B Objectives

1. What is the main purpose for this course?

After this course is expected that student enable to:
1 - Identify environmental influences on the internal space.
2 - A good deal with various environmental data for successful internal space aesthetically and functionally.
3 - Treatments for various environmental phenomena.
4 - A comparative study between the ancient and modern techniques in environmental control.
Field

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

The use of references that rely on the Internet to update the data and follow the latest knowledge and technical productions in the area
- The change in content as a result of new research in the field

C. Course Description (Note: General description in the form used in Bulletin or handbook)

Course Description:
Study of Environmental influences and control systems to their treatments in architecture

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Climatic regions of the world - Architecture relationship to the environment	**1**	**3**
Climatic regions in the Arab world. The characteristics of climate Saudi Arabia	**2**	**3**
The conditions for the well-being of the user of architectural space. The natural requirements	**3**	**3**
Control sunshine of architectural space	**4**	**3**
Proper lighting in architectural space	**5**	**3**
Rules and foundations choose HVAC (Heating, Ventilation and Air Conditioning) systems	**7**	**3**
Individual air-conditioning devices -	**8**	**3**
Objectives and types of insulation - Thermal insulation	**9**	**3**
Environmental control systems in traditional architecture	**10**	**3**
Energy sources - Fossil energy	**11**	**3**

Energy sources - renewable energy	**12**	**3**
Modern trends of environmental control	**13**	**3**
Environmental trends in the modern architecture - Green Architecture	**14**	**3**

2. Course components (total contact hours and credits per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planed	15			30		45
	Actual	15			30		45
Credit	Planed	15			15		30
	Actual	15			15		30

3. Additional private study/learning hours expected for students per week. 1

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Establish the concept of the building as a mediator between man and the environment surrounding it in all its dimensions. Surround a set of intellectual and cognitive basic data for environmental control systems	Lectures Individual and collective practical exercises	Periodic and final exams
2.0	**Cognitive Skills**		
2.1	Explain, affecting factors in internal environment of the voids. Analyze and	Lectures Individual and	Periodic and final exams

	compare the environmental processors. Selection of appropriate techniques and equipment for environmental treatment of the internal space	collective practical exercises	
3.0	**Interpersonal Skills & Responsibility**		
3.1	Research analyze and interpret documentation illustrate audio-visual display	Individual and collective practical exercises	Research reports Offers audio visual
4.0	**Communication, Information Technology, Numerical**		
4.1	Illustrate research Operate audio- visual display	Individual and collective practical exercises	Research reports Offers audio visual
5.0	**Psychomotor**		
5.1	Drawing a simplified maps and graphics	Individual and collective practical exercises	Periodic and final exams

5. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Speech / Individual or collective exercises	4-11	15%
2	Tests	6	30%
3	Research : Essay / Offers audio visual	8	15%
4	Final examination	15	40%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

Attend daily.

10 Hr / Week

E Learning Resources

1. List Required Textbooks

العمارة الإسلامية والبيئة د يحيى وزيري -سلسلة إقرأ - المجلس الثقافى الكويتى

التصميم المعمارى الصديق للبيئة "نحو عمارة خضراء": د يحيى وزيري الناشر: مكتبة مدبولى

تطبيقات على عمارة البيئة "التصميم الشمسى للفناء الداخلى" "دراسات على القاهرة وتوشكى" : د يحيى وزيري

الناشر: مكتبة مدبولى

- حسن فتحي- عمارة الفقراء - ترجمة د.مصطفى ابراهيم فوزي-وزارة الثقافة مصر1969 جامعة شيكاقو1973 - الجامعة الامريكية بالقاهرة 1989

-ارناست نوفارت عناصر التصميم والانشاء المعماري ترجمة ربيح محمد نذير الحرستاني دار قابس للطباعة و النشر و التوزيع

-Neufert E; Les éléments du projet de construction 7eme édition Dunod France 2006
- R, Delebecque Dessin - Bâtiment 1 Paris Librairie de Lagrave 1978
- R, Delebecque, Bâtiment 2 Eléments de construction Paris Librairie de Lagrave 1978
-Fathy.H-Naturel Energy and Vernacular Architecture, Chicago 1989

2. List Essential References Materials (Journals, Reports, etc.)
All references in the national environmental control.
Special to resist pollution and environmental conservation laws

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.
- www. Wikipedia.net
- www. Archinet
- Egypt architecture online
-face book page طالع لتصمم صح

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

Power point
Autocad- Archicad - Photoshop

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)
   - Classrooms equipped for lectures- Laboratory of Applied Works

2. Technology resources (AV, data show, Smart Board, software, etc.)

Data Show device fixed to the audio-visual presentations
A laptop computer for a professor of fixed device in the classroom with the appropriate software and the ability to access the World Wide Web

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

Regular office equipment CDs

G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching Analysis of the test results
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department Echo educational process among students The questionnaire submitted to students
3. Processes for Improvement of Teaching Coordination with colleagues in the Department to assess the impact and the accumulation of knowledge among students
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) Periodic inspection during the semester for the students files (lectures and Research) Periodic assessment of periodic tests and final results
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. Continuous monitoring in coordination with colleagues from higher levels to assess the effectiveness of teaching methods used

Name of Course Instructor: **Ezzeddine Souabni**

Signature: _____ Date Specification Completed: _____

Program Coordinator: _____

Signature: _____ Date Received: _____