

MSc. Courses

Architecture Technology Specification

Semester 1 :

ARC – AT 601 Climatic Environmental Design

This Course aims to introduce fundamental orders about Providing Human Comfort, including thermal comfort, and to Identify new technologies in the building's design and provide a comfortable indoor environment.

ARC – AT 602 Thought of architectural Technology

The course aim to introduce the following subjects:

- The historical development of the relationship between technology and architecture and to clarify its role in the emergence of different architectural approaches.
- Addressing the complexity of the design process, which mounts up determinants and effects on various systems and the level of (architectural, construction, service, etc ...) and the role of the digital in finding solutions for it.
- Highlighting the influential role of integration between technological systems as the most effective approach to the nature of the relationship between the Association of architecture and construction.
- The role of new technology in the emergence of new architectural trends.
- Diagnosis of the impact of technological systems as a variable basis to show the expressive aspects of creativity and formal.
- Addressing the many contemporary Virtual Reality technology and techniques of media and to clarify the role of architecture and urban landscape concepts.

ARC-AT 603 Technology of Construction and Materials

The course aims generally to:

- Identify the relationship between building as material and building as a construction and aim to teach the student the requirements of the Construction Technology and Materials Technology that helps to keep up with creations contemporary thought in the field of architecture.
- The possibility of clarifying the relationship between the material and the characteristics of the contemporary architectural form in twentieth century architecture .
- Clarify innovative materials, which aspires to link art and architectural design and technological practice.

ARC-AT 604 Architectural Theory

The aim of this course is to introduce students to the genesis of theories and assets also to keep pace with the emergence of contemporary intellectual theories and their application. As well as the course aims to build a knowledge base for the development of the history of architecture intellectually, and to form philosophical knowledge base from which the student can connect to the mechanics of the intellectual and philosophical concepts.

ARC- AT 605 Research Theory

This course aim to introduce students to the following subjects: The most important scientific research vocabularies, the public foundations of scientific research, the most important philosophical propositions public vocabulary and its currents, and the general framework of Structural Research majoring in Architecture in general.

ARC – AT 606 English Language Techniques

The aim of this course is to develop researcher ability to understand and interpretive English texts and literature, at the same time to present their knowledge in a perfect way. This would be by taking many items like: Grammar Skills, Vocabulary Skills, Speaking Skills Listening Skills, Reading Skills, and Writing Skills.

Semester 2 :

ARC – AT 607 Advanced building systems

Upon completion of the course, students will :

- Understand fundamental principles of building systems and detailing .

- Understand fundamental relationships between environment and building enclosure.
- Develop core skills to evaluate, determine and integrate appropriate of technology.
- Develop high performance to architectural systems proposals .
- Develop framework for further ongoing research on the subject .

ARC – AT 608 Sustainable Architecture

- Increasing the student's knowledge of the theoretical principles of thinking about the concepts of sustainability and its sources through the connection of this subject to several aspects of methodological and analytical in light of the data and elements of thought and reality.
- Acquiring the intellectual skill in analysis and structure according to the sustainability strategy and its mechanisms by understanding the impact of the concept of sustainability in the formulation of the formal structure, architectural configurations and the rules of the spatial organization of the architectural work.
- Disclosure of the role of sustainability concepts in construction techniques and construction materials performance, and their role in shaping the functional structure of architecture in general.

Building an architectural approach that adopts the concept of sustainability and its adoption as a destination for the generation of architects and its use in creating an intellectual base based on the design readings to achieve the architecture that is compatible with the surrounding environment

ARC-AT 609 Research techniques

- Trend towards new mechanisms helps student to multiple types of thinking to change according to the studied case.
- Knowing variables that deal with the research student to ensure the expansion of its capabilities in the creation of theoretical models.
- Increasing the knowledge to the student.
- How to use the theoretical and intellectual principle associated with the system of applied research aspects related to society.
- Emphasize the role of the researcher to influence society in order to ensure the existence of positive effects from behavioral and practical to do with members of the community.
- The practical detection of the role of the research act for the student through architecture structure associated with technological concepts.
- Mental Capacity Development to build architectural curriculum-related topics related to the competence of the IT architecture necessarily employed in the definition of intellectual bases for the student researcher.

ARC-AT 610 Project Management

Students will learn the principles of project management, planning methods, time scheduling, to have the essential tools as a knowledge base to enable using the modern

softwares for project management in high efficiency. In addition, they will know the kinds of contracts and other related subjects, as well as the principles of preparing feasibility studies for construction projects

ARC- AT 611 Elective Course (1) Statics Analysis

Statistics is concerned with scientific methods for collecting, organizing, summarizing, presenting and analyzing data as well as deriving valid conclusions and making reasonable decisions on the basis of this analysis. Statistics is concerned with the systematic collection of numerical data and its interpretation.

ARC- AT 612 Elective Course(2) (Technology of Construction and Advanced Materials)

Educating students with the knowledge about the role of advanced technology in contemporary architecture, which a combined by advances made in other fields especially digital technology , nanotechnology, bio nanotechnology, digital media technology, nanomaterials and smart materials and its applications in structural systems.

ARC – AT 613 English Language Techniques

The aim of this course is to develop researcher ability to understand and interpretive English texts and literature, at the same time to present their knowledge in a perfect way. This would be by taking many items like: Grammar Skills, Vocabulary Skills, Speaking Skills Listening Skills, Reading Skills, and Writing Skills.