



| Course Specification | |
|-----------------------------|---|
| Course Code: ARC 334 | Course Title: Working drawing and implementation documents |

| (1).Basic information | | | |
|--|--|-----------|-------|
| Program Title | Architecture Program | | |
| Department offering the program | Architecture and Urban Planning Department | | |
| Department offering the course | Architecture and Urban Planning Department | | |
| Course Code | ARC 431 | | |
| Year/level | Second Term- 2022/2023 / 3st Level | | |
| Specialization | | | |
| Number of credit hours | 2 | | |
| Teaching Hours | Lectures | Practical | Total |
| | 1 | 6 | 7 |
| Date of approval of Bylaw | 9/2023 | | |

| (2).Course Aims | |
|------------------------|------|
| No. | Aims |
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| | <p>The course aims to:</p> <ol style="list-style-type: none"> 1- Preparing designs and executive drawings for one of the large-scale architectural projects, where finishing materials, veneers, and architectural and construction details are studied and selected. 2- Preparing drawings of various technical installations (sanitary, electrical, and mechanical installations). And executive details. 3- Preparation of general conditions and specifications. 4- Preparation of operating drawings. |

(3). Learning Outcomes of Course (LOs)

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| A4.1 | Understanding Principles of building technologies, structure & construction methods, technical installations, properties of materials, and the way they may influence design decisions. |
| A8.1 | Create Fundamentals of building acquisition, operational costs, and of preparing construction documents and specifications of materials, components, and systems appropriate to the building. |
| B3.1 | Create systematic and methodic approaches when dealing with new and advancing technology. |
| B4.1 | Characteristics of engineering materials related to the architectural engineering discipline. |
| B5.1 | Participate professionally in managing construction processes. |

(4). Course Contents

| No. | Topics | Lecture | Practical/ Tutorial | Total |
|-----|--|---------|------------------------|-------|
| 1 | Introduction of structure system + project | 1 | 6 | 7 |
| 2 | Introduction of structure system + project | 1 | 6 | 7 |
| 3 | Working drawing plan | 1 | 6 | 7 |
| 4 | Working drawing plan + basment | 1 | 6 | 7 |
| 5 | Working drawing section + Details | 1 | 6 | 7 |
| 6 | Working drawing section | 1 | 6 | 7 |

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| | + Details | | | |
| 7 | Midterm Exam | | | |
| 8 | Working drawing elevation | 1 | 6 | 7 |
| 9 | Layout | 1 | 6 | 7 |
| 10 | Technical installations (sanitary, electrical, and mechanical installations). | 1 | 6 | 7 |
| 11 | Technical installations (sanitary, electrical, and mechanical installations). | 1 | 6 | 7 |
| 12 | General conditions and specifications. | 1 | 6 | 7 |
| 13 | Operating drawings. | 1 | 6 | 7 |
| 14 | Final Project | 1 | 6 | 7 |
| 15 | Final Exam | | | |
| | Total | 13 | 78 | 91 |

(5). Teaching and Learning methods

| No. | Teaching Method |
|-----|--------------------------|
| 1 | Demonstration method |
| 2 ➤ | Discussion |
| 3 ➤ | Educational Presentation |
| 4 | Storytelling |
| 5 | Problem Solving |

(6). Teaching and Learning methods of Disabled Students

| No. | Teaching Method | Reason |
|-----|----------------------|--------|
| 1 | Peer Learning | |
| 2 | Enhancement Lectures | |

(7). Students Assessment

7.1(Students Assessment Method

| No. | Assessment Method | Los |
|-----|---------------------|------------------------|
| 1 | Fast Project | A4.1, A8.1, B3.1 |
| 2 | Mini project | A4.1, A8.1 |
| 3 | Mid-term Exam | A4.1, B3.1, B5.1 |
| 4 | Individual Projects | A8.1, B3.1, B4.1, B5.1 |
| 5 | Final Exam | A4.1, A8.1, B3.1, B4.1 |

7.2 (Assessment Schedule

| No. | Assessment Method | Weeks |
|-----|------------------------|--------|
| 1 | Mini project//Homework | Weekly |
| 2 | Fast Project | N/A |
| 3 | Mid-term Exam | 7 |
| 4 | Final Discussion | 14 |
| 5 | Final Exam | 15 |

7.3 (Weighting of Assessments

| No. | Assessment Method | Weights % | Weights | |
|-----|-----------------------|-----------|---------|----|
| 1 | Fast Project | 5% | 5 | 50 |
| | Mini Project/Homework | 10% | 10 | |

| | | | |
|-------|---------------------|------|-----|
| | Mid-term Exam | 15% | 15 |
| | Individual Projects | 25 % | 15 |
| 2 | Practical | 0 | 0 |
| 3 | Final Exam | 50% | 50 |
| Total | | 100% | 100 |

(8). List of References

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| 1 | معدات البناء - د شفق الوكيل |
| 2 | Building technology |

(9). Facilities required for teaching and learning

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| 1 | Studio Hall |
| 2 | Data show |
| 3 | Google Classroom |
| 4 | White Board |
| 5 | Library |
| 6 | Internet |

(10).Matrix of Aims and LOs of the Course

| No. | Topics | Aims | LOs |
|-----|---|------|------------------|
| 1 | Introduction | - | - |
| 2 | Introduction to construction systems and structural systems | 1,2 | A4.1, B3.1, B5.1 |
| 3 | Foundations and Substructures technologies and processes | | |
| 4 | Foundations and Substructures technologies | | |

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| | and processes | | |
| 5 | Concrete construction- part one: cast in site concrete structures | | |
| 6 | Concrete construction- part Two: precast concrete technology | | |
| 7 | Midterm Exam | 1:2 | A4.1, B3.1, B5.1 |
| 8 | Concrete construction- part Two: precast concrete technology | 3,4,5 | A8.1, B3.1, B4.1 |
| 9 | prefabricated units lecture | | |
| 10 | Finishing material technology | | |
| 11 | Maintenance | | |
| 12 | Technology and environment | | |
| 13 | Case studies applications | | |
| 14 | Final Project | | |
| 15 | Final Exam | 1:5 | A4.1, A8.1, B3.1, B4.1 |

(11). Matrix of Competencies/ Program LOs with Course LOs

| No. | Competences/ Program LOs | No. | Course LOs |
|-----|---|------|---|
| A4 | Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principls. | A4.1 | Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principls. |
| A8 | Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools. | A8.1 | Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools. |
| B3 | Generate ecologically responsible, environmental conservation and rehabilitation designs; through understanding of: structural design, construction, technology and | B3.1 | Generate ecologically responsible, environmental conservation and rehabilitation designs; through understanding of: structural design, construction, technology and |

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|----|---|------|---|
| | engineering problems associated with building designs. | | engineering problems associated with building designs. |
| B4 | Transform design concepts into buildings and integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery; while having adequate knowledge of industries, organizations, regulations and procedures involved. | B4.1 | Transform design concepts into buildings and integrate plans into overall planning within the constraints of: project financing, project management, cost control and methods of project delivery; while having adequate knowledge of industries, organizations, regulations and procedures involved. |
| B5 | Prepare design project briefs and documents, and understand the context of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production. | B5.1 | Prepare design project briefs and documents, and understand the context of the architect in the construction industry, including the architect's role in the processes of bidding, procurement of architectural services and building production. |

| Title | Name | Signature |
|--------------------|--|-----------|
| Course Coordinator | Assistant prof . Nader ibrahem ismael | |
| Head of Department | Associ. Prof./Ahmed Saleh | |
| Date of Approval | 9/2022 | |