

# TOROS ÜNİVERSİTESİ

Faculty Of Fine Arts, Design And Architecture  
Architecture

## Course Information

| CONSTRUCTION AND PROJECT MANAGEMENT |          |             |          |                 |             |
|-------------------------------------|----------|-------------|----------|-----------------|-------------|
| Code                                | Semester | Theoretical | Practice | National Credit | ECTS Credit |
|                                     |          | Hour / Week |          |                 |             |
| ARC422                              | Spring   | 3           | 0        | 3               | 3           |

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prerequisites and co-requisites      | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Language of instruction              | Turkish                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Type                                 | Elective                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Level of Course                      | Bachelor's                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Lecturer                             | Dr. Öğr. Üyesi Şafak EBESEK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Mode of Delivery                     | Face to Face                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Suggested Subject                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Professional practise ( internship ) | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Objectives of the Course             | 1. Defining the role, functions, powers and responsibilities of the architect in the building production process; 2. Introducing the Construction Management Life Cycle, Management and economy concepts, theories, tools and techniques; 3. To provide information on economic and managerial problems for all levels of the construction industry (national, firm, project and process); 4. To teach management and economic analysis techniques related to project and construction management; 5. To introduce the project management information area; 6. To gain project management skills; 7. To inform the participants of the current problems, discussions and solutions of the project management information area. |
| Contents of the Course               | Introduction, the aim of the course and its relation with other courses, Business management and project management, project management knowledge areas, Planning of projects and work programs, Scope Management, Cost Management, Duration (Calendar) Management, Risk management, Project management footer information areas, Monitoring and control of projects, Project delivery systems, Tender and bid processes in construction projects, Overall assessment Current trends in construction and project management.                                                                                                                                                                                                   |

## Learning Outcomes of Course

| # | Learning Outcomes                                                                                                                                                                                                                                                                                                                                                                                             |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Having knowledge of professional ethical behavior and responsibility in the field of architecture                                                                                                                                                                                                                                                                                                             |
| 2 | To have the knowledge to evaluate, compare and criticize according to different environments and cultures by using the knowledge in the field of architecture in the local, regional, national and global context.                                                                                                                                                                                            |
| 3 | To acquire the knowledge of the relationship between human and built environment in the field of architecture, social factors, cultural diversity, human and user groups behavior and psychology.                                                                                                                                                                                                             |
| 4 | Being aware of legal rights and responsibilities within the scope of professional practice, project - application management, team work done by architects and business stakeholders, together with professional chambers, acquisition of awareness and ability to claim international and local norms.                                                                                                       |
| 5 | Observing the interaction with other disciplines related to the field of architecture and reconciliation with their own profession, communicating face-to-face or in virtual environments with student / student groups in architecture and professional stakeholders, national / international architect candidates, and taking responsibility and acquisition with effective and harmonious working ability |
| 6 | To gain the ability to do interdisciplinary study and research.                                                                                                                                                                                                                                                                                                                                               |
| 7 | Has the communication skills to realize and manage the correct communication and information transfer both verbally and in writing with all the stakeholders of the organization.                                                                                                                                                                                                                             |
| 8 | Construction Management and Application Skill Construction Management and Application Skill                                                                                                                                                                                                                                                                                                                   |

## Course Syllabus

| #  | Subjects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Teaching Methods and Technics |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 1  | Introduction: The aim of the course and its relationship with other courses. An overview of the construction industry and construction projects. Features of the product and the production process in the construction industry.                                                                                                                                                                                                                                                                 |                               |
| 2  | Business management and project management: Basic concepts - Management, Project, Effectiveness, Efficiency, Functions of management - Planning, organization, leadership, supervision. Management theories. Project management knowledge areas. Business management and project management: Basic concepts - Management, Project, Effectiveness, Efficiency, Functions of management - Planning, organization, leadership, supervision. Management theories. Project management knowledge areas. |                               |
| 3  | Planning of projects and work programs: Planning and programming concepts. Planning and programming relationship. Stages in planning and programming - Short-term and long-term planning / programming. Methods used in programming. Gantt charts, bar diagrams, network diagrams. Software used in the preparation of work programs.                                                                                                                                                             |                               |
| 4  | Scope Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |
| 5  | Cost Management: Cost planning and control. Resource management in construction projects - Materials, equipment, labor, money, information. Cost control. Investment evaluation techniques - Payback period, Net current value, Average Annual Return Rate. Budget and cash flows.                                                                                                                                                                                                                |                               |
| 6  | Cost Management: Cost estimation: Cost estimation methods used in different stages of their projects. Tools used in cost estimation.                                                                                                                                                                                                                                                                                                                                                              |                               |
| 7  | Time (Calendar) Management: Integrated management of Time, Resources and Cost, Project Planning and Programming: Basic concepts, CPM methodology, Conceptual tools, techniques used for planning and programming.                                                                                                                                                                                                                                                                                 |                               |
| 8  | Midterm exam                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |
| 9  | Risk Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| 10 | Project management knowledge sub-areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                               |
| 11 | Monitoring and control of projects: Monitoring progress in projects and their relationship with work programs.                                                                                                                                                                                                                                                                                                                                                                                    |                               |
| 12 | Project delivery systems - Stakeholders of construction projects. Project delivery systems. Construction contracts.                                                                                                                                                                                                                                                                                                                                                                               |                               |
| 13 | Tender, bid and contract: Tender and bid processes in construction projects. Contract types.                                                                                                                                                                                                                                                                                                                                                                                                      |                               |
| 14 | Overall assessment: An overall assessment of project management information fields. Current trends in construction and project management.                                                                                                                                                                                                                                                                                                                                                        |                               |
| 15 | Final Exam                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |
| 16 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |

## Course Syllabus

| #  | Material / Resources                                                                                                    | Information About Resources | Reference / Recommended Resources |
|----|-------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------|
| 1  | Proje Yönetimi Bilgi Birikimi Kılavuzu (PMBOK® Kılavuzu )                                                               |                             |                                   |
| 2  | <a href="https://www.slideshare.net/safakebesek/presentations">https://www.slideshare.net/safakebesek/presentations</a> |                             |                                   |
| 3  | R. Pilcher, Principles of Construction Management, Mc Graw-Hill Company, London, .1992                                  |                             |                                   |
| 4  | R. Johnson, The Economics of Building/A Practical Guide for the Design Professional, John Wiley & Sons, New York, 1990. |                             |                                   |
| 5  | A.Asworth, Cost Studies of Building, Longman, London, 1988                                                              |                             |                                   |
| 6  | D.J. Ferry, P.S. Brandon, Cost Planning of Building, Collins, Professional and Technical Books, London, 1986            |                             |                                   |
| 7  | Turner, Rennis, Design and Build: Contract Practice, Longman, Essex, 1986.                                              |                             |                                   |
| 8  | Blau, J.R., Architects and Firms, MIT, MA, 1988.                                                                        |                             |                                   |
| 9  | The Construction Specification Institute, 2005: The Project Resource Manual. McGraw Hill.                               |                             |                                   |
| 10 | AIA, 2008: The Architect's Handbook of Professional Practice. Wiley.                                                    |                             |                                   |
| 11 | Gold, F. and Joyce, N., 2009: Construction Project Management, Third Edition. Pearson Prentice Hall.                    |                             |                                   |

## Method of Assessment

| # | Weight | Work Type     | Work Title    |
|---|--------|---------------|---------------|
| 1 | 40%    | Mid-Term Exam | Mid-Term Exam |
| 2 | 60%    | Final Exam    | Final Exam    |

## Relationship between Learning Outcomes of Course and Program Outcomes

| # | Learning Outcomes                                                                                                                                                                                                                                                                                                                                                                                             | Program Outcomes | Method of Assessment |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------|
| 1 | Having knowledge of professional ethical behavior and responsibility in the field of architecture                                                                                                                                                                                                                                                                                                             | 1                | 1,2                  |
| 2 | To have the knowledge to evaluate, compare and criticize according to different environments and cultures by using the knowledge in the field of architecture in the local, regional, national and global context.                                                                                                                                                                                            | 2                | 1,2                  |
| 3 | To acquire the knowledge of the relationship between human and built environment in the field of architecture, social factors, cultural diversity, human and user groups behavior and psychology.                                                                                                                                                                                                             | 3                | 1,2                  |
| 4 | Being aware of legal rights and responsibilities within the scope of professional practice, project - application management, team work done by architects and business stakeholders, together with professional chambers, acquisition of awareness and ability to claim international and local norms.                                                                                                       | 12               | 1,2                  |
| 5 | Observing the interaction with other disciplines related to the field of architecture and reconciliation with their own profession, communicating face-to-face or in virtual environments with student / student groups in architecture and professional stakeholders, national / international architect candidates, and taking responsibility and acquisition with effective and harmonious working ability | 13               | 1,2                  |
| 6 | To gain the ability to do interdisciplinary study and research.                                                                                                                                                                                                                                                                                                                                               | 18               | 1,2                  |
| 7 | Has the communication skills to realize and manage the correct communication and information transfer both verbally and in writing with all the stakeholders of the organization.                                                                                                                                                                                                                             | 19               | 1,2                  |
| 8 | Construction Management and Application Skill Construction Management and Application Skill                                                                                                                                                                                                                                                                                                                   | 20               | 1,2                  |

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

## Work Load Details

| #  | Type of Work                                                  | Quantity | Time (Hour) | Work Load  |
|----|---------------------------------------------------------------|----------|-------------|------------|
| 1  | Course Duration                                               | 14       | 3           | 42         |
| 2  | Course Duration Except Class (Preliminary Study, Enhancement) | 14       | 3           | 42         |
| 3  | Presentation and Seminar Preparation                          | 0        | 0           | 0          |
| 4  | Web Research, Library and Archival Work                       | 0        | 0           | 0          |
| 5  | Document/Information Listing                                  | 0        | 0           | 0          |
| 6  | Workshop                                                      | 0        | 0           | 0          |
| 7  | Preparation for Midterm Exam                                  | 0        | 0           | 0          |
| 8  | Midterm Exam                                                  | 1        | 3           | 3          |
| 9  | Quiz                                                          | 0        | 0           | 0          |
| 10 | Homework                                                      | 2        | 15          | 30         |
| 11 | Midterm Project                                               | 0        | 0           | 0          |
| 12 | Midterm Exercise                                              | 0        | 0           | 0          |
| 13 | Final Project                                                 | 0        | 0           | 0          |
| 14 | Final Exercise                                                | 0        | 0           | 0          |
| 15 | Preparation for Final Exam                                    | 0        | 0           | 0          |
| 16 | Final Exam                                                    | 1        | 3           | 3          |
|    |                                                               |          |             | <b>120</b> |