**ARCHITECTURE PhD PROGRAMME**

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| **First Year** | | | | | | |
| **I. Semester** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
| 501011101 | [THE SCIENTIFIC RESEARCH METHODS AND ITS ETHICS](#c1) | 7.5 | 3+0 | 3 | **C** | Turkish |
| 504011601 | [RESEARCH METHODOLOGY IN ARCHITECTURE](#c2) | 7.5 | 3+0 | 3 | **C** | Turkish |
|  | Elective Course-1 | 7.5 | 3+0 | 3 | E | Turkish |
|  | Elective Course-2 | 7.5 | 3+0 | 3 | E | Turkish |
|  | Total of I. Semester | 30 |  | 12 |  |  |
| **II. Semester** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
|  | Elective Course-3 | 7.5 | 3+0 | 3 | E | Turkish |
|  | Elective Course-4 | 7.5 | 3+0 | 3 | E | Turkish |
|  | Elective Course-5 | 7.5 | 3+0 | 3 | E | Turkish |
| 504012001 | PhD Seminar | 7.5 | 0+1 | - | **C** | Turkish |
|  | Total of II. Semester | 30 |  | 9 |  |  |
|  | TOTAL OF FIRST YEAR | 60 |  | 21 |  |  |

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| **Second Year** | | | | | | |
| **III. Semester** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
| 504011801 | PhD PROFICIENCY | 30 | 0+1 | **-** | **C** | Turkish |
|  | Total of III. Semester | 30 |  |  |  |  |
| **IV. Semester** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
| 501011102 | THESIS PROPOSAL | 30 | 0+1 | **-** | **C** | Turkish |
|  | Total of IV. Semester | 30 |  |  |  |  |
|  | TOTAL OF SECOND YEAR | 60 |  |  |  |  |

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| **Third Year** | | | | | | |
| **V. Semester** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
| 504011802 | PhD THESIS STUDY | 25 | 0+1 | **-** | **C** | Turkish |
| 504011803 | SPECIALIZATION FIELD COURSE | 5 | 3+0 | **-** | **C** | Turkish |
|  | Total of V. Semester | 30 |  |  |  |  |
| **VI. Semester** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
| 504011802 | PhD THESIS STUDY | 25 | 0+1 | **-** | **C** | Turkish |
| 504011803 | SPECIALIZATION FIELD COURSE | 5 | 3+0 | - | **C** | Turkish |
|  | Total of VI. Semester | 30 |  |  |  |  |
|  | TOTAL OF THIRD YEAR | 60 |  |  |  |  |

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| **Fourth Year** | | | | | | |
| **VII. Semester** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
| 504011802 | PhD THESIS STUDY | 25 | 0+1 | **-** | **C** | Turkish |
| 504011803 | SPECIALIZATION FIELD COURSE | 5 | 3+0 | **-** | **C** | Turkish |
|  | Total of VII. Semester | 30 |  |  |  |  |
| **VIII. Semester** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
| 504011802 | PhD THESIS STUDY | 25 | 0+1 | **-** | **C** | Turkish |
| 504011803 | SPECIALIZATION FIELD COURSE | 5 | 3+0 | - | **C** | Turkish |
|  | Total of VIII. Semester | 30 |  |  |  |  |
|  | TOTAL OF FOURTH YEAR | 60 |  |  |  |  |

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| **Elective Courses** | | | | | | |
| Code | Course Title | ECTS | T+P | Credit | C/E | Language |
| 504011614 | [AESTHETICAL CONT. IN ARCH.DURING THE REPUB.PERIOD](#c21) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012603 | [ARCHITECTURAL THEORY AND CRITICISM](#c4) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011616 | [BUILDING ENERGY PERFORMANCE SIMULATION](#c5) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011602 | [CONSERVATION OF CULTURAL HERITAGE](#c10) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011613 | [CONSTRUCTION CONTRACTS AND PROCUREMENT METHODS](#c23) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012602 | [CONSTRUCTION TECH.IN HIST.MONUMENTAL ARCHITECTURE](#c20) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011609 | [CONSTRUCTION TECHNIQUES IN VERNACULAR ARCHITECTURE](#c8) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011606 | [CREATIVE RESEARCH IN ARCHITECTURE](#c15) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012609 | [Adaptive Facades](#c26) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012606 | [CULTURE/SPACE](#c11) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012604 | [DEV.AND CURRENT STATUS IN TURKEY'S PUBLIC WORKS](#c18) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012605 | [DISASTER MANAGEMENT IN THE BUILT ENVIRONMENT](#c25) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011617 | [ECOLOGY AND ARCHITECTURE](#c7) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012601 | [ENERGY PERFORMANCE OF BUILDINGS](#c3) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011604 | [ENVIRONMENTALLY RESPONSIVE DESIGN STRATEGIES](#c6) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012607 | [HEALTHY CITIES AND URBAN ERGONOMY](#c19) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011608 | [IMMOV.CULT.PROP.LEGIS.INLIGHTOF INTERN.PRES.PRINC.](#c22) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011610 | [KEY CONTEMPORARY THINKERS IN ARCHITECTURE](#c13) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011615 | [PRINCIPLES OF BUILDING PHYSICS](#c24) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011607 | [SELECTED CASES IN ARCHITECTURAL CRITICISM](#c17) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011612 | [SPECIAL TOPICS IN ARCHITECTURE](#c14) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011611 | [STUDIES ON ARCH. REPRESENTATION AND NARRATIVE](#c12) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504011605 | [URBAN IDENTITY AND COLLECTIVE MEMORY](#c9) | 7.5 | 3+0 | 3 | E | TurkIsh |
| 504012608 | [VIRTUAL AND AUGMENTED REALITY IN ARCHITECTURE](#c16) | 7.5 | 3+0 | 3 | E | TurkIsh |

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | Joint Course for the Institute | **SEMESTER** | Fall-Spring |

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| **COURSE** | | | |
| **CODE** | 501011101 | **TITLE** | The Scientific Research Methods and Its Ethics |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| MSc-  Ph.D | 3 | | 0 | 0 | | | 3+0 | 7,5 | COMPULSORY  ( X ) | | ELECTIVE  (   ) | Turkish |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 1,5 | | 1,5 | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 1 | | 40 |
| Quiz | | | | |  | |  |
| Homework | | | | |  | |  |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (     ) | | | | |  | |  |
| **Final Examination** | | | | | | | 60 |
| **PREREQUISITE(S)** | | | | | None | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Science, the scientific thought and other fundamental concepts, the scientific research process and its techniques, Methodology: Data Collecting-Analysis-Interpretation, Reporting the scientific research (Preparation of a thesis, oral presentation, article, project), Ethics, Ethics of scientific research and publication. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The main objectives are: To examine the foundations of scientific research and the scientific research methods, to teach the principles of both the methodology and the ethics, to realize the process on a scientific research and to evaluate the results of research, to teach reporting the results of research (on a thesis, presentation, article). | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Applying the scientific research methods and the ethical rules in their professional life. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Gaining awareness on ethical principles at basic research methods, becoming skillful at analyzing and reporting the data obtained in scientific researches, being able to have researcher qualification with occupational sense of responsibility, having the scientific and vocational ethics’ understanding and being able to defend this understanding in every medium. | | | | | | | |
| **TEXTBOOK (Turkish)** | | | | | Karasar, N. (2015). Bilimsel Araştırma Yöntemi. Nobel Akademi Yayıncılık, Ankara. | | | | | | | |
| **OTHER REFERENCES** | | | | | **1-**Büyüköztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş., Demirel, F. (2012). Bilimsel Araştırma Yöntemleri. Pegem Akademi Yayınevi, Ankara.  **2-**Tanrıöğen, A. (Editör). (2014). Bilimsel Araştırma Yöntemleri. Anı Yayıncılık, Ankara.  **3-**Türkiye Bilimler Akademisi Bilim Etiği Komitesi. Bilimsel Araştırmada Etik ve Sorunları, Ankara: TÜBA Yayınları, (2002).  **4-**Ekiz, D. (2009). Bilimsel Araştırma Yöntemleri: Yaklaşım, Yöntem ve Teknikler. Anı Yayıncılık, Ankara.  **5-**Day, Robert A. (Çeviri: G. Aşkay Altay). (1996). Bilimsel Makale Nasıl Yazılır ve Nasıl Yayımlanır?, TÜBİTAK Yayınları, Ankara.  **6-**Özdamar, K. (2003). Modern Bilimsel Araştırma Yöntemleri. Kaan Kitabevi, Eskişehir.  **7-**Cebeci, S. (1997). Bilimsel Araştırma ve Yazma Teknikleri. Alfa Basım Yayım Dağıtım, İstanbul.  **8-**Wilson, E. B. (1990). An Introduction to Scientific Research. Dover Pub. Inc., New York.  **9-**Çömlekçi, N. (2001). Bilimsel Araştırma Yöntemi ve İstatistiksel Anlamlılık Sınamaları. Bilim Teknik Kitabevi, Eskişehir. | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Science, scientific thought and other basic concepts (University, history of university, higher education, science, scientific thought and other related concepts) |
| 2 | Science, scientific thought and other basic concepts (University, history of university, higher education, science, scientific thought and other related concepts) |
| 3 | The scientific research and its types (Importance of the scientific research, types of science, scientific approach) |
| 4 | The scientific research process and its techniques (Access to the scientific knowledge, literature search, determining the research issue, definition of the problem, planning) |
| 5 | The scientific research process and its techniques (Access to the scientific knowledge, literature search, determining the research issue, definition of the problem, planning) |
| 6 | The scientific research process and its techniques (Access to the scientific knowledge, literature search, determining the research issue, definition of the problem, planning) |
| 7 | The method and the approach: Collecting, analysis and interpretation of the data (Data, data types, measurement and measurement tools, collecting data, organizing data, summarizing data, analysis and the interpretation of data) |
| 8 | The method and the approach: Collecting, analysis and interpretation of the data (Data, data types, measurement and measurement tools, collecting data, organizing data, summarizing data, analysis and the interpretation of data) |
| 9 | Finalizing the scientific research (Reporting, preparing the thesis, oral presentation, preparing an article and a project) |
| 10 | Finalizing the scientific research (Reporting, preparing the thesis, oral presentation, preparing an article and a project) |
| 11 | Finalizing the scientific research (Reporting, preparing the thesis, oral presentation, preparing an article and a project) |
| 12 | Ethics, scientific research and publication ethics (Ethics, rules of ethics, occupational ethics, non-ethical behaviors) |
| 13 | Ethics, scientific research and publication ethics (Ethics, rules of ethics, occupational ethics, non-ethical behaviors) |
| 14 | Ethics, scientific research and publication ethics (Ethics, rules of ethics, occupational ethics, non-ethical behaviors) |
| 15,16 | Mid-term exam, Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE INSTITUTE’S GRADUATE PROGRAMME’S LEARNING OUTCOMES** | | | | **CONTRIBUTION LEVEL** | | | |
| **NO** | **LEARNING OUTCOMES (M.Sc.-Ph.D.)** | | | **3**  High | | **2**  Mid | **1**  Low |
| **LO 1** | Having the scientific and vocational ethics’ understanding and being able to defend this understanding in every medium. | | |  | |  |  |
| **LO 2** | Being able to have researcher qualification with occupational sense of responsibility. | | |  | |  |  |
| **LO 3** | Becoming skillful at analyzing and reporting the data obtained in scientific researches. | | |  | |  |  |
| **LO 4** | Gaining awareness on ethical principles at basic research methods. | | |  | |  |  |
| **Prepared by :** | | |  | **Date:** | |  | | | |

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011601 | **TITLE** | Research Methodology in Architecture |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  ( + ) | | ELECTIVE  (   ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
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| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 2 | | 60 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | This course for PHD in Architecture aims to introduce the definition of knowledge, acquisition and production of knowledge | | | | | | | |
| **COURSE OBJECTIVES** | | | | | An introduction to the field of epistemology. Topics include the analysis and introduction of knowledge from the simpliest to advanced methodologies. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | This course will introduce epistemological concepts and discussions thus students may employ critical and scientific approaches to professional life. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | At the end of this course, students in graduate level will learn how to produce scientific knowledge.  Students will have the knowledge of how to access basic database, information through the use of libraries.  Students achieve the skill to analysis, synthesis and discussion of a scientific topic.  Studients will acquire writing skills for academic papers. | | | | | | | |
| **TEXTBOOK** | | | | |  | | | | | | | |
| **OTHER REFERENCES** | | | | | 1. Rosenberg, Alex, Bilim Felsefesi: Çağdaş Bir Giriş, dipnot Yay., Ankara, 20142. Kuhn T. Bilimsel Devrimlerin Yapısı, Kırmızı Yay. İstanbul, 20103. Popper K., Bilimsel Araştırmanın Mantığı, Yapı Kredi Yayınları, 20034. Groat L. and D. Wang, Architectural Research Methods, New York: Wiley, 2002 (ISBN: 0-471-33365-4)5. McQueen, Ron and Knussen, Christina, Research Methods for Social Science : An Introduction, Pearson Education , 20026. Marshall, C. & Rossman, G. B. Designing qualitative research Newbury park, Calif.: Sage Publications, 19897. Fisek, M. H. Elementary methods of research in the social behavioral sciences ,Istanbul: Bogazici University, 19988. Grbich, Carol, New Approaches in Social Research, SAGE Publicatins, 20049. Creswell J., Research Design, Thousand Oaks: Sage Publications, 200310. Heynen, Hilde, Mimarlik ve Modernite, Versus Yay. Istanbul 201111. Holliday, Adrian, Doing and Writing Qualitative Research, Sage Pub. London 200212. Robinson J., “Architectural research: Incorporating myth and science,” JAE, 44, 1, pp. 20-32, 1990.13. Templer J. ,“Architectural Research,” JAE, 44, 1, p. 3, 1990.14. Bamberger M., Integrating quantitative and qualitative research in development projects (pp. 8-16). Washington, D.C.: World Bank. 2000.15. Munslow, A. , Objectivity and the writing of history. History of European Ideas, 28(1 -2),43-50, 2002.16. Graff, H. J. , Teaching [and] historical understanding: disciplining historicalimagination with historical context. Interchange, 30(2), 143-169, 1999.17. Bouma, G. D., Atkinson, G. B. J., & Dixon, B. R. , Chapter 12: Writing up your research. In A Handbook of social science research (2nd ed.) (pp. 221-234). Oxford;University Press. 1995.18. Cebeci, S., Bilimsel Araştırma ve Yazma Teknikleri, Alfa Yay., Istanbul. Ocak 200219. Creswell, John, Nitel Araştırma Yöntemleri: Beş Yaklaşıma Gore Nitel Araştırma ve Araştırma Deseni; Ed. Bütün; M.; Demir, S., Siyasal Kitapevi,2015 | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Inroduction |
| 2 | Aims, Content of Research Methodology in Architecture |
| 3 | Research Methodolgy Approaches in Architecture |
| 4 | Interpretive-Historical Research in Architecture |
| 5 | Correlation Research in Architecture |
| 6 | Experimental and Quasi-Experimental Research in Architecture |
| 7 | Experimental and Quasi-Experimental Research in Architecture |
| 8 | Logical Argumentation In Architecture |
| 9 | HOMEWORK PRESENTATIONS |
| 10 | Case Studies and Combined Strategies in Architecture |
| 11 | Latest Researh Methodology in Architecture: Design-based Research |
| 12 | Latest Researh Methodology in Architecture: Research-based Research |
| 13 | Latest Researh Methodology in Architecture: Action-based Research |
| 14 | Latest Researh Methodology in Architecture: Investigation of Research Studies |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012601 | **TITLE** | ENERGY PERFORMANCE OF BUILDINGS |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 0 | | 3 | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 1 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 40 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 30 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | The present course focuses on performance measures discussed at building scale and built environment and covers especially problems related to the design and implementation of a performance assessment system. Relevant topics include understanding the phases of a building audit, defining significant building processes related to energy performance, investigation of national and international performance indicators, and discussing the factors that affect the energy performance of a building. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course aims to deliver an in depth understanding of issues related to building energy performance, such as building audits, monitoring, building envelope specifications, occupant control and adaptive behavior, HVAC systems. The relevant national and international assessment procedures and tools, the concept, building energy performance gap and building energy performance improvements including whole-building retrofits are discussed in detail. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | It is expected that the PhD candidates who enroll in this course and pursue research in the related research domain would be able to develop an understanding regarding building energy performance and the factors that affect building energy performance. Further, they would be able to assess the energy performance of a building and the relevant background for building requirements related to users, society and the environment. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The PhD candidates enrolled in this course would be able to understand the factors that affect the energy performance of a building, perform analyses and calculations, and have a basic understanding of computational approaches. In addition, the candidates are expected to develop a sufficent literacy of energy performance benchmarks and tools utilized in assessment of building energy performance. | | | | | | | |
| **TEXTBOOK** | | | | | Boemi S.N., Irulegi O., Santamouris M. 2016. Energy Performance of Buildings: Energy Efficiency and Built Environment in Temperate Climates. Springer International Publishing, First Edition, ISBN:978-3-319-20830-5 | | | | | | | |
| **OTHER REFERENCES** | | | | | De Wilde P. 2018. Building Performance Analysis. Wiley-Blackwell, First Edition. ISBN:978-1119341925 | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction to the Concepts of Building Energy Performance |
| 2 | Building Audits |
| 3 | Building Diagnostics |
| 4 | Building Energy Performance Monitoring / Understanding Microclimate |
| 5 | Short vs. Long Term Monitoring Studies |
| 6 | MIDTERM EXAMINATION 1 |
| 7 | Understanding Building Installation Systems |
| 8 | Schedules, Activities and Occupancy |
| 9 | Building Operation and Maintenance |
| 10 | Occupant Control and Adaptive Behavior |
| 11 | Case Study: Monitoring Building Performance |
| 12 | Case Study: Monitoring Building Performance |
| 13 | Case Study: Monitoring Building Performance |
| 14 | Case Study: Monitoring Building Performance |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012603 | **TITLE** | ARCHITECTURAL THEORY AND CRITICISM |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 | 0 | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( x ) | Turkish |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | |  | | | | 0 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 1 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | |  | |  |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | | 1 | | 30 |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Architectural Theory and Criticism is a research seminar consisting on assigned readings, presentations, discussions, and researches on current topics in architectural theory.Throughout the course a broad range of art and architectural examples, as well as relevant art historical, theoretical and research based writings on topics will be explored. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course aims at exploring specific areas of concern for architectural theory. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | By the end of the course, students will practice debate, write short papers, and construct related presentations in verbal and other media. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Identify and present particular critical theoretical positions in architecture and develop a critical reflective attitude towards these. Evaluate the critical and theoretical positions in the course literature from a comparative perspective.  Have a more nuanced understanding of art, architecture and urbanism ; ability of using gathered theoretical and practical knowledge in order to analysis, investigate and solve the particular architectural problems.  Develop an ability to verbalize statements about works of art, architectureand urbanism and to communicate the knowledge to others.  Have improved writing skills in academic Turkish. | | | | | | | |
| **TEXTBOOK** | | | | | Alan Colquhoun, Essays in Architectural Criticism: Modern Architecture and Historical Change, Cambridge, MA: MIT Press, 1981.A. Krista Sykes and K. Michael Hays, Constructing a New Agenda: Architectural Theory 1993-2009, Princeton Architectural Press, 2010.Harry Francis Mallgrave and Christina Contandriopoulos, Architectural Theory: Volume II - An Anthology from 1871 to 2005, Wiley-Blackwell; 1 edition, 2008.Kate Nesbitt,Theorizing a New Agenda for Architecture:: An Anthology of Architectural Theory 1965 - 1995, Princeton Architectural Press;1997.Reyner Banham, Theory and Design in the First Machine Age, The MIT Press; 2nd edition ,1980.Le Corbusier, Towards a New Architecture, trans. Frederick Etchells, London: ArchitecturalPress, 1946.Manfredo Tafuri, Architecture and Utopia: Design and Capitalist Development, trans.Barbara Luigia La Penta, Cambridge, Mass: MIT Press, 1976Michael Hays, Architecture Theory Since 1968, The MIT Press Cambridge Mass., 1998.Neil Leach,Rethinking Architecture: A Reader in Cultural Theory, Routlegde, 1997. | | | | | | | |
| **OTHER REFERENCES** | | | | |  | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction: selection of topics |
| 2 | Research on topics:introductory presentations + discussions |
| 3 | Research on topics:introductory presentations + discussions |
| 4 | Research on topics: description of the primary sources + presentations + discussions |
| 5 | Research on topics: description of the primary sources + presentations + discussions |
| 6 | Midterm Examination |
| 7 | Description of a critical stand point |
| 8 | Description of the various critical positions + presentations + discussions |
| 9 | Developing a Critical argumentative framework + presentations + discussions |
| 10 | Presentation of related cases + discussions |
| 11 | Presentation of related cases + discussions |
| 12 | Presentation of related cases + discussions |
| 13 | Final Presentations |
| 14 | Final Presentations |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **BUILDING SCIENCE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011616 | **TITLE** | BUILDING ENERGY PERFORMANCE SIMULATION |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 0 | | 3 | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 1 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 40 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 30 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Due to the increasing complexity of energy and environmental challenges Building Performance Simulation (BPS) is acknowledged as an effective approach employed in the design and operation of buildings. BPS provides dynamic modeling of a building's energy related processes and draws upon the disciplines of heat and mass transfer, thermodynamics, fluid mechanics, lighting, building technology, thermal and visual comfort, numerical methods, environmental science and occupant behavior. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The present course aims to transfer the knowledge of modeling issues and energy simulation of a building and its systems and deliver the theoretical background of building energy performance simulation software. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | It is expected that the PhD candidates who enroll in this course and pursue research in the related research domain would be able to use one BPS tool and model a small scale building with medium-complexity. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The PhD candidates enrolled in this course would be able to learn the basic computational modeling assumptions and will learn to build a series of increasingly complex models that allow exploring key features and limitations of the adopted software. | | | | | | | |
| **TEXTBOOK** | | | | | Augenbroe G., Malkawi A. 2004. Advanced Building Simulation. Routledge, First Edition, ISBN:978-0415321228 | | | | | | | |
| **OTHER REFERENCES** | | | | | Hensen JLM., Lamberts R. 2011. Building Performance Simulation for Design and Operation. Routledge, First Edition, ISBN:9780415474146Clarke J.2001. Energy Simulation in Building Design. Butterworth-Heinemann, Second Edition, ISBN:978-0750650823 | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Understanding the Fundamentals of Building Energy Performance Simulation I |
| 2 | Understanding the Fundamentals of Building Energy Performance Simulation II |
| 3 | Understanding the Fundamentals of Building Energy Performance Simulation III |
| 4 | Modeling Assumptions and Constraints |
| 5 | An Introduction to the Simulation Software: DesignBuilder |
| 6 | Midterm Examination 1 |
| 7 | Modeling a Low-Complexity Building in DesignBuilder |
| 8 | Defining Building Physical Characteristics in DesignBuilder |
| 9 | Defining Schedules, Activities and Occupancy in DesignBuilder |
| 10 | Discussing the Validity and Reliability of Simulation Outputs |
| 11 | Midterm Examination 2 |
| 12 | Modeling a Medium-Complexity Building in DesignBuilder I |
| 13 | Modeling a Medium-Complexity Building in DesignBuilder II |
| 14 | Modeling a Medium-Complexity Building in DesignBuilder III |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE** **PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Knowledge of design, making, data collection, analysis of outcomes and interpretations of them in order to study architectural problems. |  |  |  |
| **LO 2** | Knowledge of the determination and definition of different architectural problems and the selection of appropriate design and analysis methods in architecture and related fields. |  |  |  |
| **LO 3** | Knowledge of developing, using and selecting essential modern techniques and devices for architectural projects and effective utilization of information technologies. |  |  |  |
| **LO 4** | Adequate knowledge on architecture; ability of using theoretical and practical knowledge in order to analysis, investigate and solve the architectural problems. |  |  |  |
| **LO 5** | Verbal and literal communication abilities in Turkish and enhancement of foreign languages skills. |  |  |  |
| **LO 6** | Ability of individual study and being member of a team in disciplinary or interdisciplinary studies. |  |  |  |
| **LO 7** | Knowledge of professional and ethical responsibilities. |  |  |  |
| **LO 8** | Knowledge of professional practice in project design and construction; awareness of innovation, sustainable development and enterpreneurship. |  |  |  |
| **LO 9** | Consciousness to necessity of lifelong learning; ability of getting information, pursuing developments in science and self-renovation. |  |  |  |
| **LO 10** | Effects of architectural applications on health, environment and safety on global scale; awarness of national and international standards and legislations for architectural design. |  |  |  |
| **LO 11** |  |  |  |  |
| **LO 12** |  |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011604 | **TITLE** | ENVIRONMENTALLY RESPONSİVE DESIGN STRATEGIES |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 0 | | 3 | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 1 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 40 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 30 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | The present course focuses on the environmentally responsive design strategies that could be employed in new building designs or existing building retrofits, with respect to fundamental scientific principles governing the thermal environment and human physiology. In this respect the course includes strong references to contemporary issues of environmentally responsive building design and resource efficiency. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The present course aims to deliver fundamental passive design notions, which result in reduced active system dependency and related energy consumption in buildings. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | PhD candidates enrolled in this course and pursue further research in the relevant domain become capable of exploring the passive technologies and strategies to control the indoor environment as well as the basic analyses needed to inform design decision-making and examine building performance. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | PhD candidates enrolled in this course could apply the strategies of passive design further in new buildings or in retrofit studies for existing buildings. Hybrid modes of design could as well be possible based on unique building characteristics. The PhD candidates are expected to understand the interaction between the building morphology, envelope and functions and the surrounding topography, texture, flora and climate. | | | | | | | |
| **TEXTBOOK** | | | | | Hawkes D., McDonald J. and Steemers K. 2001. The Selective Environment: An Approach to Environmentally Responsive Architecture, Routledge, First Edition, ISBN:978-0419235309 | | | | | | | |
| **OTHER REFERENCES** | | | | |  | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | The Significance of Environmentally Responsive Design |
| 2 | Understanding the Topography and the Climate |
| 3 | Building Morphology: Orientation |
| 4 | Building Morphology: Compactness |
| 5 | Building Morphology: Percentage of Glazing |
| 6 | MIDTERM EXAMINATION 1 |
| 7 | Building Envelope: Thermal Mass |
| 8 | Building Envelope: Glazing and Solar Gains |
| 9 | Daylighting |
| 10 | Natural Ventilation |
| 11 | Passive System Designs and Detailing I |
| 12 | Passive System Designs and Detailing II |
| 13 | Passive System Designs and Detailing III |
| 14 | Passive System Designs and Detailing IV |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011607 | **TITLE** | ECOLOGY AND ARCHITECTURE |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | |  |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | Turkish |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
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| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 1 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | |  | |  |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | | 1 | | 30 |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | | - | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | The course is offered to incoming PhD students in the PhD track in the School of Architecture (open to other interested graduate students as well). It is organized as a seminar course to introduce the participants to ecological means of design and research. It focuses on systematic review and critique of the major concepts, models, and theories of ecology within the discourses of architecture and design. It is structured as a series of introductory presentations based on related texts and cases. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course aims at exploring ecology for architectural design and theory. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | By the end of the course, students will practice debate, write short papers, and construct related presentations in verbal and other media on the topic of ecology and architecture. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Identify and present particular critical theoretical ecological positions in architecture and develop a critical reflective attitude towards these. Evaluate the critical and theoretical positions in the course literature from a comparative perspective.  Have a more nuanced understanding of art, architecture and urbanism ; ability of using gathered theoretical and practical knowledge in order to analysis, investigate and solve the particular ecological architectural problems.  Develop an ability to verbalize statements about ecology and architecture and to communicate the knowledge to others.  Have improved writing skills in academic Turkish. | | | | | | | |
| **TEXTBOOK** | | | | | Elizabeth Kolbert, Field Notes from a Catastrophe (rev. ed.), Bloomsbury, 2014, ISBN: 978-1408860441Kerry Emanuel; Bob Inglis, What We Know about Climate Change, MIT Press, 2018 | | | | | | | |
| **OTHER REFERENCES** | | | | | Gareth Doherrty, Charles Waldheim, Is Landscape... ?: Essays on the Identity of Landscape, Routledge, 2015Mohsen Mostafavi, Gareth Doherty, Ecological Urbanism, Lars Muller; 4th Revised ed. Edition, 2016 | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction: selection of topics |
| 2 | Research on topics:introductory presentations + discussions |
| 3 | Research on topics:introductory presentations + discussions |
| 4 | Research on topics: description of the primary sources + presentations + discussions |
| 5 | Research on topics: description of the primary sources + presentations + discussions |
| 6 | Research on topics: description of the primary sources + presentations + discussions |
| 7 | Midterm Examination |
| 8 | Description of a critical stand point |
| 9 | Developing a Critical argumentative framework + presentations + discussions |
| 10 | Developing a Critical argumentative framework + presentations + discussions |
| 11 | Presentation of related cases + discussions |
| 12 | Presentation of related cases + discussions |
| 13 | Final Presentations |
| 14 | Final Presentations |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011609 | **TITLE** | CONSTRUCTION TECHNIQUES IN VERNACULAR ARCHITECTURE |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | |  | | | | 0 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 2 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 30 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Architectural characteristics of vernacular buildings built in different periods within different functions, local building materials and construction techniques will be examining. The structure of the course will be conducted by means of discussing and making inferences throughout written documentation on the construction techniques, formed the architectural characteristics via morphology and structural features, of different types of vernacular buildings. Both oral and written presentations and attendance are mandatory. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | In this course, it is expected to be able to: understand vernacular architecture and historic construction techniques; recognize and examine the original and corresponding construction techniques used for composing vernacular building types in different periods, and make inferences. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Understanding the building technology of vernacular architecture and various vernacular buildings within their architectural characteristics and construction techniques. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Ability to identify vernacular architecture; Ability to identify structural features and construction techniques of vernacular buildings, to synthesize information and to be capable of making comparisons in between; Developing and getting awareness of conservation and being aware towards vernacular and historic buildings | | | | | | | |
| **TEXTBOOK** | | | | |  | | | | | | | |
| **OTHER REFERENCES** | | | | |  | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction |
| 2 | A brief description of the features of vernacular architecture through the construction techniques within conceptual framework of course content, discussion of given presentation and assignment subjects |
| 3 | Presentation and discussion of vernacular architecture and buildings |
| 4 | Presentation and discussion of the construction techniques in vernacular architecture: The construction techniques in Roman vernacular architecture (the characteristics of Roman vernacular architecture and the features of the period) |
| 5 | Presentation and discussion of the construction techniques of Roman vernacular buildings |
| 6 | MIDTERM EXAMINATION 1 |
| 7 | Presentation and discussion of the construction techniques in vernacular architecture: The construction techniques in Medieval vernacular architecture (the characteristics of Medieval vernacular architecture and the features of the period) |
| 8 | Presentation and discussion of the construction techniques in vernacular architecture: The construction techniques in Turkish period (between 12. and 19 centuries, in Seljuk, the Principalities, and Ottoman) vernacular architecture (the characteristics of vernacular architecture and the features of the period) |
| 9 | Presentation and discussion of the construction techniques in vernacular architecture: The construction techniques of 19. century Ottoman vernacular architecture (the characteristics of 19. century Ottoman vernacular architecture and the features of the period) |
| 10 | Presentation and discussion of the construction techniques in vernacular architecture: The construction techniques from 20. century till recently in vernacular architecture (the characteristics of vernacular architecture and the features of the period) |
| 11 | MIDTERM EXAMINATION 2 |
| 12 | Presentation and discussion of selected readings and specified courseworks or/and themes |
| 13 | Presentation and discussion of selected readings and specified courseworks or/and themes |
| 14 | Presentation and discussion of selected readings and specified courseworks or/and themes |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011605 | **TITLE** | Urban Identity and Collective Memory |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 3 | |  | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 50 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 50 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Urban identity and collective memory should be studied in order to ensure the sustainability of the identity of the world cities. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The students will practice questioning today's cities and thinking on the history of the cities. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Architecture vocational education and professional ethics lead each architect to take responsibility by producing ideas on the city. The course will underline the fact that architecture education does not only consist of "physical construction" but requires working for the benefit of the city considering its social content and urban rights. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | This course will provide students with the responsibility of raising awareness of the professional and local authorities who will make interventions by accessing the historical, cultural and social information belonging to that place prior to every architectural intervention to the cities of today. | | | | | | | |
| **TEXTBOOK** | | | | | ROSSİ, A. (2006), Şehrin Mimarisi, (çeviren Nurdan Gürbilek) Kanat Kitap, İstanbul. | | | | | | | |
| **OTHER REFERENCES** | | | | | HARVEY, D. (2016), Sosyal Adalet ve Şehir, (çeviren Mehmet Moralı), Metis Yayınları, İstanbul.HARVEY, D. (2013), Asi Şehirler, (çeviren Ayşe Deniz Temiz), Metis Yayınları, İstanbul.HARVEY, D. (1997), Postmodernliğin Durumu, (çeriren Sungur Savran), Metis Yayınları, İstanbul.LEFEBVRE, H. (2014), Kentsel Devrim, (çeviren Selim Sezer), Sel Yayıncılık, İstanbul.LEFEBVRE, H. (1998), Modern Dünyada Gündelik Hayat, (çeviren Işın Gürbüz), Metis Yayınları, İstanbul.LYNCH, K. (2010), Kent İmgesi, (çevrinen İrem Başaran), Türkiye İş Bankası Yayınları, İstanbul. | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Discussion of Eskişehir collective memory and urban identity |
| 2 | ROSSI, A. Architecture of the City |
| 3 | Lefebvre, “The Urban Phenomenon”, The Urban Revolution. |
| 4 | Harvey, “Preface", Rebel Cities. |
| 5 | Harvey, “Right to the City”, Rebel Cities |
| 6 | HOMEWORK PRESENTATION |
| 7 | Discussion and determination of Eskişehir urban space in the collective memory and urban identity |
| 8 | Harvey, “Introduction", Social Justice and the City. |
| 9 | LEFEBVRE, H. Everyday Life in the Modern World. |
| 10 | HARVEY, D. The Condition of Postmodernity. |
| 11 | LYNCH, K. Image of the City |
| 12 | Presentations on arcitectural elements that take place in Eskişehir's collective memory and urban identity. |
| 13 | Presentations on arcitectural elements that take place in Eskişehir's collective memory and urban identity. |
| 14 | Evaluations on arcitectural elements that take place in Eskişehir's collective memory and urban identity. |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011602 | **TITLE** | Conservation of Cultural Heritage |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
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| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 2 | | 40 |
| Quiz | | | | |  | |  |
| Homework | | | | |  | |  |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | | 2 | | 20 |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Approaches of cultural heritage conservation will be dealt with regarding diverse problems under diverse conditions | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Exploring different cultural heritage conservation approaches through international documents and cases; producing interdisciplinary knowledge on cultural heritage conservation in a holistic manner | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Developing new approaches for the conservation of immovable cultural heritage; contributing to interdiscipliary knowledge on the issue | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Questioning diverse problems in different historic cities and in this context, developing vision, strategies and new conservation methods. | | | | | | | |
| **TEXTBOOK** | | | | | Recent books and articles will be handed to students weekly. | | | | | | | |
| **OTHER REFERENCES** | | | | | Bandarin, Francesco, and Van Oers, Ron (2014). (Eds.), Reconnecting the City: The Historic Urban Landscape Approach and the Future of Urban Heritage. Wiley-Blackwell.Erder, C. (1975) Tarihi Çevre Bilinci, ODTÜ, AnkaraErder, C. (1999) Tarihi Çevre Kaygısına Giriş, ODTÜ Mimarlık Fakültesi Yayını, AnkaraGüçhan, N, Ş. (2003) Her Dem Yeşil Yapraklı Bir Ağaç: Cevat Erder'e Armağan, ODTÜ Mimarlık Fakültesi Basım İşliği, AnkaraLarkham, P J (1996) Conservation and the City, Routledge, New YorkPapageorgiou, A. (1971) Continuity and Change, Praeger Publishers Inc. LondonTiesdell, S. & Oc, T. & Heath, T. (1996) Revitalizing historic urban quarters, Boston : Butterworth-Architecture | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Development of the notion of conservation |
| 2 | Conservation in the 20th century through international documents I |
| 3 | Conservation in the 20th century through international documents I |
| 4 | IConservation in the 20th century through international documents III |
| 5 | Conservation in the 21st century through international documents |
| 6 | MIDTERM EXAMINATION I |
| 7 | New types of cultural heritage |
| 8 | Historic Urban Landscape |
| 9 | The role of culture in conservation I |
| 10 | The role of culture in conservation II |
| 11 | MIDTERM EXAMINATION II |
| 12 | Cultural heritage management: definitions and concepts |
| 13 | Cultural heritage management: problems |
| 14 | Cultural heritage management: the quest |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **Architecture (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012606 | **TITLE** | Culture/Space |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | Turkish |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
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| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 50 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 50 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Culture and space concepts in architecture should be studied in order to ensure the sustainability of the identity of the world cities. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The students will practice questioning today's cities and thinking on the history of the cities. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Architecture vocational education and professional ethics lead each architect to take responsibility by producing ideas on the city. The course will underline the fact that architecture education does not only consist of "physical construction" but requires working for the benefit of the city considering its social content and urban rights. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | This course will provide students with the responsibility of raising awareness of the professional and local authorities who will make interventions by accessing the historical, cultural and social information belonging to that place prior to every architectural intervention to the cities of today. | | | | | | | |
| **TEXTBOOK** | | | | | KAÇAR, A. D. (2016) Kültür/Mekan: Gazi Orman Çiftliği, Ankara, Koç Üniveristesi Yayınları. | | | | | | | |
| **OTHER REFERENCES** | | | | | HARVEY, D. (2016), Sosyal Adalet ve Şehir, (çeviren Mehmet Moralı), Metis Yayınları, İstanbul.HARVEY, D. (2013), Asi Şehirler, (çeviren Ayşe Deniz Temiz), Metis Yayınları, İstanbul.HARVEY, D. (1997), Postmodernliğin Durumu, (çeriren Sungur Savran), Metis Yayınları, İstanbul.LEFEBVRE, H. (2014), Kentsel Devrim, (çeviren Selim Sezer), Sel Yayıncılık, İstanbul.LEFEBVRE, H. (1998), Modern Dünyada Gündelik Hayat, (çeviren Işın Gürbüz), Metis Yayınları, İstanbul.LYNCH, K. (2010), Kent İmgesi, (çevrinen İrem Başaran), Türkiye İş Bankası Yayınları, İstanbul. | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Discussion of Eskişehir collective memory and urban identity |
| 2 | KAÇAR, A. D. (2016) Kültür/Mekan: Gazi Orman Çiftliği, Ankara, Koç Üniveristesi Yayınları. |
| 3 | Lefebvre, “The Urban Phenomenon”, The Urban Revolution. |
| 4 | Harvey, “Preface", Rebel Cities. |
| 5 | Harvey, “Right to the City”, Rebel Cities |
| 6 | Midterm Examination 1 |
| 7 | Discussions on Eskişehir's urban culture. |
| 8 | Harvey, “Introduction", Social Justice and the City. |
| 9 | LEFEBVRE, H. Everyday Life in the Modern World. |
| 10 | HARVEY, D. The Condition of Postmodernity. |
| 11 | Midterm Examination 2 |
| 12 | LYNCH, K. Image of the City |
| 13 | Presentations on arcitectural elements that take place in Eskişehir's urban culture. |
| 14 | Evaluations on arcitectural elements that take place in Eskişehir's urban culture. |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE       PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Knowledge of design, making, data collection, analysis of outcomes and interpretations of them in order to study architectural problems. |  |  |  |
| **LO 2** | Knowledge of the determination and definition of different architectural problems and the selection of appropriate design and analysis methods in architecture and related fields. |  |  |  |
| **LO 3** | Knowledge of developing, using and selecting essential modern techniques and devices for architectural projects and effective utilization of information technologies. |  |  |  |
| **LO 4** | Adequate knowledge on architecture; ability of using theoretical and practical knowledge in order to analysis, investigate and solve the architectural problems. |  |  |  |
| **LO 5** | Verbal and literal communication abilities in Turkish and enhancement of foreign languages skills. |  |  |  |
| **LO 6** | Ability of individual study and being member of a team in disciplinary or interdisciplinary studies. |  |  |  |
| **LO 7** | Knowledge of professional and ethical responsibilities. |  |  |  |
| **LO 8** | Knowledge of professional practice in project design and construction; awareness of innovation, sustainable development and enterpreneurship. |  |  |  |
| **LO 9** | Consciousness to necessity of lifelong learning; ability of getting information, pursuing developments in science and self-renovation. |  |  |  |
| **LO 10** | Effects of architectural applications on health, environment and safety on global scale; awarness of national and international standards and legislations for architectural design. |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011611 | **TITLE** | STUDIES ON ARCHITECTURAL REPRESENTATION AND NARRATIVE |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
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| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 2 | | 60 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | In this course, architectural representation and narrative concepts will be discussed within the context of architecture and related disciplines (visual arts, cinema, literature etc.) and architectural readings will be made as part of the narrative in different disciplines | | | | | | | |
| **COURSE OBJECTIVES** | | | | | It is aimed to make architectural readings in architecture and related disciplines, to discuss the concepts of representation and narrative within the context of representation, narrative and architectural relations for the graduate students doing graduate research in architecture. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | It is aimed to increase students' ability of research, discussions and build infrastructure for narration and representation concepts for students who will work in the field of architectural theory. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | It is aimed to provide the students with the information infrastructure about the concepts of narration and representation within the course,  Analysis and synthesis of works belonging to different disciplines related to architecture discipline,  The evaluation and comprehension of the results of analysis and synthesis, The study of integrating these results into the discipline of architecture  and presenting these outcomes in academic environments constitutes the main learning outputs of the course | | | | | | | |
| **TEXTBOOK** | | | | |  | | | | | | | |
| **OTHER REFERENCES** | | | | | Architecture's Pretexts: Spaces of Translation. Aarati Kanekar,Architecture and Film, Architectural Design Journal, 1994.Narrative Discourse: An Essay in Method. Gerard Genette, 1972.Narrative Theory: Critical Concepts in Literary and Cultural Studies . Edited by Mieke Bal Volume I-IIAll architecture, design and art journals, Architecture data base | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction |
| 2 | Discussions on architecture and representation |
| 3 | Representation as part of architectural design process |
| 4 | Architectural Representation in different discipline |
| 5 | Studies on examples |
| 6 | Studies on examples |
| 7 | Discussions on architecture and narrative |
| 8 | Space, perception and Narrative |
| 9 | Discussions on architecture, narrative and representation relationship through examples |
| 10 | Discussions on architecture, narrative and representation relationship through examples |
| 11 | Discussions on architecture, narrative and representation relationship through examples |
| 12 | Architecture as part of narrative in different media |
| 13 | Literature and architectural narrative |
| 14 | Cinema and architectural narrative |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011610 | **TITLE** | Key Contemporary Thinkers in Architecture |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 3 | |  | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 6 | | 60 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Key Contemporary Thinkers in Architecture focuses its interest mainly on the thinkers, authors and critics of the last quarter of the twentieth century and to the first two decades of the twenty-first in terms of space and place, architectural theory and criticism | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The Course on Key Contemporary Thinkers in Architecture aims first and foremost at introducing and informing the works of emerging thinkers and authors of the field.  The second aim is to broaden the scope of the theoretical and critical field of architectural knowledge.  The third aim of the course is to develop new ideas and criticisms by articulating toward their emergent concepts and critical practices. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | To distinguish the human geography of architectural theory.  To focus on emergent and alternative conceptions in architectural criticism.  To develop a differentiating perspective within and towards architectural thinking. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To analyze contemporary resources of architectural thinking.  To decode the works of thinkers from fields as diverse as social sciences, arts and social sciences as well as emerging sciences. | | | | | | | |
| **TEXTBOOK** | | | | | Phil Hubbard, Rob Kitchin. 2011. Key Thinkers on Space and Place. US: Sage Publications. | | | | | | | |
| **OTHER REFERENCES** | | | | | Harry Francis Mallgrave, David Goodman. 2011. An Introduction to Architectural Theory. 1968 to the Present. US: Wiley-Blackwell.Michael Sheringham. 2006. Everyday Life. Theories and Practices from Surrealism to the Present. UK: Oxford University Press.John Lechte. 1994. Fifty Key Contemporary Thinkers. New York: Routledge.Lori J. Marso. 2016. Fifty ONe Key Feminist Thinkers. US:Routledge.Alessandro Giovannelli. 2012. Aesthetics: The Key Thinkers. New York, London: Bloomsbery. | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | ntroduction. Aim of the course, content and methods of study. |
| 2 | Benedict Anderson, Marc Augé, Jean Baudrillard |
| 3 | Zygmunt Bauman, Hommi Bhabha, Judith Butler. |
| 4 | Anne Buttimer, Manuel Castells, Michel de Certeau. |
| 5 | Gilles Deleuze, Michel Foucault. |
| 6 | 1. MIDTERM EXAMINATION |
| 7 | Anthony Giddens, Derek Gregory, Tornsten Haegerstrand. |
| 8 | Stuart Hall, Donna Haraway, bell hooks. |
| 9 | David Harvey, Bruno Latour, Tim İngold |
| 10 | Cindi Katz, Henri Lefebvre, Kevin Lynch. |
| 11 | 2. MIDTERM EXAMINATION |
| 12 | Doreen Massey, Anssi Paasi, Allan Pred. |
| 13 | Edward Said, Saskia Sassen, Andrew Sayer. |
| 14 | Edward Soja, Immanuel Wallerstein, Raymond Williams |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011612 | **TITLE** | Special Topics in Architecture |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | |  | | | | 0 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 1 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | |  | |  |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | | 1 | | 30 |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Special Topics in Architecture is a research seminar consisting on assigned readings, presentations, discussions, and researches on current topicsin architectural theory and design practice.It opens up a framework for thinking about art, architecture, and urbanism of the last seventy years. Throughout the course a broad range of art and architectural examples, as well as relevant art historical, theoretical and research based writings on topics will be explored. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The course aims at exploring specific areas of concern for architectural theory and design oriented research studies. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | By the end of the course, students will practice debate, write their own philosophical/research statements & short papers, and construct related presentations in verbal and other media. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Identify and present particular critical theoretical positions in architecture and develop a critical reflective attitude towards these. Evaluate the critical and theoretical positions in the course literature from a comparative perspective.  Have a more nuanced understanding of art, architecture and urbanism ; ability of using gathered theoretical and practical knowledge in order to analysis, investigate and solve the particular architectural problems.  Develop an ability to verbalize statements about works of art, architectureand urbanism and to communicate the knowledge to others.  Have improved writing skills in academic Turkish. | | | | | | | |
| **TEXTBOOK** | | | | | A. Krista Sykes and K. Michael Hays, Constructing a New Agenda: Architectural Theory 1993-2009, Princeton Architectural Press, 2010.Anthony Vidler,The Architectural Uncanny, MIT Press, 1992.C. Greig Crysler, Stephen Cairns and Hilde Heynen, The Sage Handbook of Architectural Theory, Sage Publication, 2012.Hilde Heynen, Back from Utopia: The Challenge of the Modern Movement, nai010 publishers, 2016Joan Ockman,Architecture Culture: 1943-1968: A Documentary Anthology, Columbia Books of Architecture, Rizzoli, 1993.Kate Nesbitt, Theorizing a New Agenda for Architecture:An Anthology of Architectural Theory 1965-1995, Princeton Architectural Press, 1996.Michael Hays, Architecture Theory Since 1968, The MIT Press Cambridge Mass., 1998.Neil Leach,Rethinking Architecture: A Reader in Cultural Theory, Routlegde, 1997. | | | | | | | |
| **OTHER REFERENCES** | | | | |  | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction: selection of topics |
| 2 | Studies on topics:introductory presentations + discussions |
| 3 | Studies on topics:introductory presentations + discussions |
| 4 | Studies on topics: description of the primary sources + development of bibliography + presentations + discussions |
| 5 | Studies on topics: description of the primary sources + development of bibliography + presentations + discussions |
| 6 | MIDTERM EXAMINATION 1 |
| 7 | Introduction to the description of issues |
| 8 | Description of issues + presentations + discussions |
| 9 | Presentation of related cases + discussions |
| 10 | Presentation of related cases + discussions |
| 11 | Presentation of related cases + discussions |
| 12 | Final presentations |
| 13 | Final presentations |
| 14 | Final presentations |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011606 | **TITLE** | CREATIVE RESEARCH IN ARCHITECTURE |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
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| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 30 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | | 1 | | 30 |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | The content of the course is to investigate creativity in architectural research focus on prospects, paradigms, methods and approaches mainly concerning latest research in literature | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Investigation of major paradigms in creativity and their attached methods,, developing skills in reading, critical analysis, interpretation of creativity in architectural research. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Course is specially offered for the sutends aiming to develop their expertise in architectural theory and criticism. They are expected to develop the abovementioned skills. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Graduate students who successfully pass this course gain the following knowledge, skills and proficiencies :  - Ability to understand creativity, creative thinking in architecture  - Interpreting and forming new types of knowledge by combining the knowledge from various other disciplines | | | | | | | |
| **TEXTBOOK** | | | | | No specific textbook. Course will be established upon a number of selected text according to semester's objectives and focus. | | | | | | | |
| **OTHER REFERENCES** | | | | | Kirk, S.J.; Spreckelmeyer K.F., Creative Design Decisions, Van Nostrand Reinhold Com., NewYork ,1988Rowe P.G., Design Thinking, MIT Press, Cambridge 1995Sternberg, R., The Natures of Creativity, Cmabridge Unv.Press., 1988Runco,M., Divergent Thinking, Ablex Publishing Corporation, NewJersey, 1991Sternberg, R., and Lubart, T. (1999). The Concept of Creativity: Prospects and Paradigms. In R. Sternberg, and R. Sternberg (Ed.), Handbook of Creativity (pp. 3-15). NY, USA: Cambridge Univ. Press.Gardner, H. (1993). Frames of Mind, NY, USA: Basic Books.Finke, R. A., Ward, T. B., and Smith, S. M. (1992). Creative Cognition: Theory, Research and Applications, Cambridge, MA: The MIT Pres | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction: What is creativity? |
| 2 | Concept of creativity : Paradigms and Prospects |
| 3 | Foundations of Cretivity |
| 4 | History of Research on Creativity |
| 5 | Research Strategies, Methods on Creativity |
| 6 | Special Topics in Creativity |
| 7 | Creative Thinking : Meaning and Concepts I |
| 8 | Creative Thinking : Meaning and Concepts II |
| 9 | Research Approaches in Creative Thinking |
| 10 | Creative thinking , Problem Finding and Problem Solving |
| 11 | HOMEWORK PRESENTATIONS |
| 12 | Creative Thinking in Architecture |
| 13 | Assessment of Creative Thinking in Architecture : Latest Discussions |
| 14 | Assessment of Creative Thinking in Architecture :Research Strategies and Approaches |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **Architecture (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012608 | **TITLE** | Virtual and Augmented Reality in Architecture |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | Turkish |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
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| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 50 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 50 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Augmented Reality (AR) could be interpreted as a new type of “reality,” a new “medium” (or perhaps rather environment) produced as a result of digital(ly produced) objects such as sound, graphics, three dimensional models and animations simultaneously transmitted with the real world. In short, it could be interpreted as layers of virtual and the real, overlapped with each other, a new medium presenting an unprecedented potential experience that could be possible neither in real nor virtual worlds. AR systems are interactive. Beyond being in a state of passive “observer,” created environments present the user a world they could be a part of and where an active bodily and mental engagement is possible.  It could be claimed that parallel to the developments in both hardware technologies and software, AR technologies are getting better and more available/accessible day by day. In this respect, it could be said that while its use is expanding as far as the end users are concerned they begun to become widely available and practical tools, and consequently an active part of the daily life. It could be assumed that both trends are here to stay, and in the future AR would be a more important field of study and practice than it is today.  As it would be expected, AR technologies present a great potential for architecture and as an emerging technology, implies an important research and application line that is worth to follow. This course is formulated towards addressing essential theories and basic concepts concerning AR and VR, and thier application to architecture. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Main aim is to introduce the students basic concepts and theories concerning AR and VR and their application to architecture. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Course is formulated towards academics and students who intend to develop their expertise towards this framework. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | As an outcome students are expected to learn basic concepts about AR and VR, and develop an understanding about the theories and applications concerning these technologies' application to architecture. | | | | | | | |
| **TEXTBOOK** | | | | | see references. | | | | | | | |
| **OTHER REFERENCES** | | | | | Abboud, R. (2014). Architecture in an age of Augmented Reality: Opportunities and Obstacles for Mobile AR in Design, Construction and Post Completion. Azuma, R. T. (1993). Tracking requirements for augmented reality. Communications of the ACM(36(7)), pp. 50-51. Azuma, R. T. (1997, 6 4). A survey of Augmented Reality. Presence: Teleoperators& Virtual Environments, pp. 355-385. Bimber, O., & Raskar, R. (2005). Spatial Augmented Reality. Wellesley: A K Peters, Ltd. Broll, W., Lindt, I., Ohlenburg, J., Wittkamper, M., & Yuan, C. (2004). ARTHUR: A Collaborative Augmented Environment for Architectural Design and Urban Planning. JVRB-Journal of Virtual Reality and Broadcasting(1(1)). Caudell, T. P., & Mizell, D. W. (1992). Augmented reality: An application of heads-up display technology to manual manufactoring process. In Hawaii International Conferense on System Sciences, (pp. 656-669). Höllerer, T., Feiner, S., MacIntyre, B., & Webster, A. (1997). A touring machine: Prototyping 3D mobile augmented reality systems for exploring the urban environment. Personal Technologies(1(4)), pp. 208-217. Kim, K., Billinghurst, M., Bruder, G., Duh, H. B.-L., & Welch, G. F. (2018). Revisiting Trends in Augmented Reality Research: A Review of the 2nd Decade of ISMAR (2008-2017). IEEE Transactions on Visualization and Computer Graphics, (s. 1-16). Krueger, M. W. (1977). Responsive environments. National Computer Conference (pp. 423-433). New York: Association for Computing Machinery. Liestøl, G. (2011). Learning through situated simulations: Exploring mobile augmented reality (Master Thesis). Colorado: ECAR University of Oslo. Liestøl, G. (2014). Along the Appian Way. Storytelling and Memory across Time and Space in Mobile Augmented Reality. EuroMed 2014, LNCS 8740 (pp. 248-257). Springer. Milgram, P., & Kishino, F. (1994). A taxonomy of mixed reality visual display. IEICE Transactions on Information Systems, 77(12), pp. 1321-1329. Piekarski, W., & Thomas, B. (2002). ARQuake: The Outdoor Augmented Reality Gaming System. Communications of the ACM(45(1)), pp. 36-38. Rekimoto, J., & Nagao, K. (1995). Te world through the computer: Computer augmented interaction with real world environments. In Proceedings of the 8th annual ACM symposium on User interface and software technology, (pp. 29-36). Shin, J., Kim, J., & Woo, W. (2017). Narrative design for Rediscovering Daereungwon: A location-based augmented reality game. IEEE International Conference on Consumer Electronics (ICCE) (pp. 384-387). IEEE. Siltanen, S. (2012). Theory and Applications of Marker-based Augmented Reality. Espoo: VTT Technical Research Centre of Finland. Sutherland, I. E. (1965). The Ultimate Display. Proceeding of IFIP, (pp. 506-508). Sutherland, I. E. (1968). Head-mounted three dimensional display. Fall Joint Computer Conference, (pp. 757-764). Velaora, M., Roy, R. v., & Guéna, F. (2020). ARTech an Augmented Reality Educational Prototype for Architectural Design. 2020 Fourth World Conference on Smart Trends in Systems, Security and Sustainability (WorldS4) (pp. 110-115). IEEE. | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | What is AR and VR? Selected essential readings. |
| 2 | What is AR and VR? Selected essential readings |
| 3 | AR and VR in Architecture. Theories |
| 4 | AR and VR in Architecture. Theories. |
| 5 | AR and VR in Architecture. Investigation of Selected Cases |
| 6 | Midterm Examination 1 |
| 7 | AR and VR in Architecture. Investigation of Selected Cases |
| 8 | Individual works and discussion |
| 9 | Development of individual works. |
| 10 | Development of individual works. |
| 11 | Midterm Examination 2 |
| 12 | Development of individual works. |
| 13 | Development of individual works. |
| 14 | Development of individual works. |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE Architecture PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Knowledge of design, making, data collection, analysis of outcomes and interpretations of them in order to study architectural problems. |  |  |  |
| **LO 2** | Knowledge of the determination and definition of different architectural problems and the selection of appropriate design and analysis methods in architecture and related fields. |  |  |  |
| **LO 3** | Knowledge of developing, using and selecting essential modern techniques and devices for architectural projects and effective utilization of information technologies. |  |  |  |
| **LO 4** | Adequate knowledge on architecture; ability of using theoretical and practical knowledge in order to analysis, investigate and solve the architectural problems. |  |  |  |
| **LO 5** | Verbal and literal communication abilities in Turkish and enhancement of foreign languages skills. |  |  |  |
| **LO 6** | Ability of individual study and being member of a team in disciplinary or interdisciplinary studies. |  |  |  |
| **LO 7** | Knowledge of professional and ethical responsibilities. |  |  |  |
| **LO 8** | Knowledge of professional practice in project design and construction; awareness of innovation, sustainable development and enterpreneurship. |  |  |  |
| **LO 9** | Consciousness to necessity of lifelong learning; ability of getting information, pursuing developments in science and self-renovation. |  |  |  |
| **LO 10** | Effects of architectural applications on health, environment and safety on global scale; awarness of national and international standards and legislations for architectural design. |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011607 | **TITLE** | Selected Cases in Architectural Criticism |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | |  | | | | 3 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | |  | |  |
| Project | | | | |  | |  |
| Report | | | | | 1 | | 20 |
| Seminar | | | | | 1 | | 20 |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 60 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Couse is offered as a part of the will-be-inaugurated doctoral program of the department. One of the contents of the course is to investigation of major paradigms in architectural criticism. In accordance with the semesterly decided focus and objectives, a number of selected paradigms will be investigated. The second content of the course is to prepare work of architectural criticism concerning an architectural work, a built environment, sometimes an architectural text, by departing from one of these paradigms. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Examination of major paradigms of architectural criticim and their attached methods, and departing from these frameworks, developing skills in reading, critical analysis, interpretation of architectural works, and writing about works of architecture. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Course is specially offered for the sutends aiming to develop their expertise in architectural theory and criticism. They are expected to develop the abovementioned skills. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Students are expected to develop a familiarity towards a number of paradigms in architectural criticism, and learn to develop an essay in architectural criticism while employing the theoretical and conceptual framework implied by one of the examined paradigms. | | | | | | | |
| **TEXTBOOK** | | | | | No specific textbook. Course will be established upon a number of selected text according to semester's objectives and focus. | | | | | | | |
| **OTHER REFERENCES** | | | | | Colquhoun, Alan. 1981a. "Displacement of Concepts in Le Corbusier." In Essays in Architectural Criticism, Modern Architecture and Historical Change, 51-66. Cambridge, Mass., London: The MIT Press.Colquhoun, Alan. 1981b. "Formal and Functional Interactions: A Study of Two Late Buildings by Le Corbusier." In Essasys in Architectural Criticism: Modern Architecture and Historical Change, 31-41. Cambridge, Mass., and London, England: The MIT Press.Colquhoun, Alan. 1990. Mimari Eleştiri Yazıları. Translated by Ali Cengizkan. İstanbul: Şevki Vanlı Yayınları.Krauss, Rosalind. 1979. "Sculpture in the Expanded Field." October no. 8:30-44.Krauss, Rosalind. 1982. "Photography's Discursive Spaces: Landscape/View." Art Journal no. 42 (4):311-319.Krauss, Rosalind. 1987. "Death of a Hermeneutic Phantom: Materialization of the Sign in the Work of Peter Eisenman." In House of Cards New York: Oxford University Press.Rowe, Colin. 1947. "The Mathematics of the Ideal Villa, Palladio and Le Corbusier Compared." Architectural Review.Rowe, Colin. 1977. "The Mathematics of the Ideal Villa." In The Mathematics of the Ideal Villa and Other Essays. Cambridge, Massachusetts and London, England: The MIT Press.Rowe, Colin. 1994. "Bibliotheca Alexandrina: An also ran?" In Form Work: Colin Rowe, edited by Cynthia Davidson, 51-57. Anyone Corporation.Rowe, Colin, and Fred Koetter. 1978. Collage City. Cambridge, Mass. and London.: The MIT Press. | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction |
| 2 | Readings and discussions on the theoretical and cocneptual framework of the course. |
| 3 | Readings and discussions on the theoretical and cocneptual framework of the course. |
| 4 | Readings and discussions on the theoretical and cocneptual framework of the course. |
| 5 | Readings and discussions on the theoretical and cocneptual framework of the course. |
| 6 | SEMINAR PRESENTATIONS |
| 7 | Analytical studies on hte selected cases |
| 8 | Analytical studies on hte selected cases |
| 9 | Developing critical essays |
| 10 | Developing critical essays |
| 11 | Studies on essays |
| 12 | Studies on essays |
| 13 | Studies on essays |
| 14 | Studies on essays |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012604 | **TITLE** | Development and Current Status in Turkey's Public Works |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 | 0 | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | Turkish |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | |  | | | | 0 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 2 | | 60 |
| Quiz | | | | |  | |  |
| Homework | | | | |  | |  |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | | - | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Starting with the situation of the Public Works from the Ottoman geography to todays Turkish Republic, to examine it with a comparative point of view. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Legislation is one of the most important factors that shape the built environment. In this course, it is aimed to evaluate the development and change comparatively by examining the processes of civil architecture and engineering, construction and legislation applied in the Ottoman Empire, changing with modernization since the last periods of the Empire. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | -To learn what Public Works are and their logic;  -To learn the development process of Public Works;  -To examine the factors that shape the Public Works. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | -Learning the concepts of the Public Works;  -To examine this concept and what it means in the Ottoman Empire in Turkey;  -To gain knowledge and interest in Turkish history. | | | | | | | |
| **TEXTBOOK** | | | | | - | | | | | | | |
| **OTHER REFERENCES** | | | | | - | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction |
| 2 | What is Public Works? |
| 3 | Relationship between Public Works and architecture. |
| 4 | Factors affect Public Works |
| 5 | Presentations |
| 6 | Midterm 1 |
| 7 | Public Works during Ottoman era |
| 8 | Public Works during Ottoman era |
| 9 | Public Works at Turkish Republic |
| 10 | Presentations |
| 11 | Midterm 2 |
| 12 | Presentations |
| 13 | Presentations |
| 14 | Presentations |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012607 | **TITLE** | HEALTHY CITIES AND URBAN ERGONOMY |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | |  | | | | 0 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 2 | | 40 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | | 1 | | 20 |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Cities are living organisms and affect the health of their inhabitants with physical, social, psychological and environmental factors. Under the leadership of the World Health Organization, the concept of kent Healthy City tartışma has been a subject of considerable debate and many projects have been produced for many cities. Urban Ergonomics aims to design the urban outdoor space with human focus. For anyone who is an important parameter for a healthy city, design includes design arrangements for disadvantaged groups (elderly, disabled, children, etc.) to use the urban spaces equally. Healthy city; It defines a city in sustainable development and social development, which is accessible, equal rights, participatory society in strong solidarity, respectful of historical-cultural and natural heritage. These topics will be discussed in this course. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The aim of this course is to teach the design parameters of Healthy Cities and Urban Ergonomics issues, which offer equal rights for all people for sustainable development and social development. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Healthy cities policies of local governments will be examined through sample projects and new design methodologies will be developed. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | In the final part of the course, a selected urban problem will be designed by producing solutions with healthy and ergonomic urban design parameters. | | | | | | | |
| **TEXTBOOK** | | | | | rier R., “Urban Space”, Academy Editions.London, 1984Harvey D., Asi Şehirler, Şehir Hakkından Kentsel Devrime Doğru, Çevirmen: Ayşe Deniz Temiz, Metis Yayıncılık,Harvey, D, (2006) Sosyal Adalet ve Şehir, çev. Mehmet Moralı, Metis Yayınları. | | | | | | | |
| **OTHER REFERENCES** | | | | | •Mumford, L. (2007), Tarih Boyunca Kent, çev. Gürol Koca ve Tamer Tosun, Ayrıntı Yayınları, İstanbul•Erdönmez E., Akı A., “Açık Kamusal Kent Mekanlarının Toplum İlişkilerindeki Etkileri”, Megaron, YTÜ, Mim. Fak. E-Dergi, Cilt1, Sayı 1•Erkan N., “Ergonomi, Verimlilik, Sağlık ve Güvenlik İçin İnsan Faktörü Mühendisliği”, MPM Yay., Ankara, 2001•Otaner F., Keskin A., “Kentsel Geliştirmede Kamusal Alanların Kullanımı”, Mimarlık, Planlama, Tasarım, İTÜ Dergisi, Cilt:4, Sayı:1, İst. Mart 2005•Meral Özbek, Kamusal Alan, Hil Yayınları, İstanbul, 2004•P.Gökgür . (2008) Kentsel Mekanda Kamusal Alanın Yeri (Bağlam Yayınevi,İstanbul)Aydınlı, Semra; “Kentsel Mekânı Okumak Görüngübilim Bakış Açısından Kentsel Mekân”, 1. Ulusal Kentsel Tasarım Kongresi Bildiriler Kitabı, İstanbul 1999, s.155-165 | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | the concept of urban space and public space |
| 2 | Urban Readings |
| 3 | Urban rights |
| 4 | The concept, development and goals of healthy cities |
| 5 | Case studies |
| 6 | Midterm Examination 1 |
| 7 | Urban design principles for different user groups |
| 8 | Case studies |
| 9 | The concept of urban ergonomics, development and objectives |
| 10 | Case studies |
| 11 | Midterm Examination 2 |
| 12 | Analysis in selected sample area |
| 13 | Defining the problem of the selected area |
| 14 | Development of solutions to the field according to the healthy urban and urban ergonomics design parameters |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE       PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Knowledge of design, making, data collection, analysis of outcomes and interpretations of them in order to study architectural problems. |  |  |  |
| **LO 2** | Knowledge of the determination and definition of different architectural problems and the selection of appropriate design and analysis methods in architecture and related fields. |  |  |  |
| **LO 3** | Knowledge of developing, using and selecting essential modern techniques and devices for architectural projects and effective utilization of information technologies. |  |  |  |
| **LO 4** | Adequate knowledge on architecture; ability of using theoretical and practical knowledge in order to analysis, investigate and solve the architectural problems. |  |  |  |
| **LO 5** | Verbal and literal communication abilities in Turkish and enhancement of foreign languages skills. |  |  |  |
| **LO 6** | Ability of individual study and being member of a team in disciplinary or interdisciplinary studies. |  |  |  |
| **LO 7** | Knowledge of professional and ethical responsibilities. |  |  |  |
| **LO 8** | Knowledge of professional practice in project design and construction; awareness of innovation, sustainable development and enterpreneurship. |  |  |  |
| **LO 9** | Consciousness to necessity of lifelong learning; ability of getting information, pursuing developments in science and self-renovation. |  |  |  |
| **LO 10** | Effects of architectural applications on health, environment and safety on global scale; awarness of national and international standards and legislations for architectural design. |  |  |  |
| **LO 11** |  |  |  |  |
| **LO 12** |  |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012602 | **TITLE** | CONSTRUCTION TECHNIQUES IN HISTORIC MONUMENTAL ARCHITECTURE |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 0 | |  | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 2 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 30 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | | NO | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Architectural characteristics of historic buildings built in different periods within different functions, local building materials and construction techniques will be examining. The structure of the course will be conducted by means of discussing and making inferences throughout written documentation on the construction techniques, formed the architectural characteristics via morphology and structural features, of different types of monumental buildings. Both oral and written presentations and attendance are mandatory. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | In this course, it is expected to be able to: understand historic monumental architecture and historic construction techniques; recognize and examine the original and corresponding construction techniques used for composing historic monumental building types, and make inferences. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Understanding the building technology of historic monumental architecture and representative historic monumental buildings within their architectural characteristics and construction techniques. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Ability to identify historical monumental architecture; Ability to identify structural features and construction techniques of historic monumental buildings, to synthesize information and to be capable of making comparisons in between; Developing and getting awareness of conservation and being aware towards historical monumental buildings | | | | | | | |
| **TEXTBOOK** | | | | |  | | | | | | | |
| **OTHER REFERENCES** | | | | |  | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction |
| 2 | A brief description of the features of historic monumental architecture through the construction techniques within conceptual framework of course content, discussion of given presentation and assignment subjects |
| 3 | Presentation and discussion of historic monumental architecture and buildings |
| 4 | Presentation and discussion of the construction techniques in monumental architecture: The construction techniques in Roman monumental architecture (the characteristics of Roman monumental architecture and the features of the period) |
| 5 | Presentation and discussion of the construction techniques of Roman monumental buildings |
| 6 | Midterm Examination 1 |
| 7 | Presentation and discussion of the construction techniques in monumental architecture: The construction techniques in Byzantium monumental architecture (the characteristics of Byzantium monumental architecture and the features of the period) |
| 8 | Presentation and discussion of the construction techniques in monumental architecture: The construction techniques in Seljuk monumental architecture (the characteristics of Seljuk monumental architecture and the features of the period) |
| 9 | Presentation and discussion of the construction techniques in monumental architecture: The construction techniques of Principalities monumental architecture (the characteristics of the principalities monumental architecture and the features of the period) |
| 10 | Presentation and discussion of the construction techniques in monumental architecture: The construction techniques in Ottoman monumental architecture (the characteristics of Ottoman monumental architecture and the features of the period) |
| 11 | Midterm Examination 2 |
| 12 | Presentation and discussion of the construction techniques of Ottoman monumental buildings |
| 13 | Presentation and discussion of selected readings and specified courseworks or/and themes |
| 14 | Presentation and discussion of selected readings and specified courseworks or/and themes |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE- PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Knowledge of design, making, data collection, analysis of outcomes and interpretations of them in order to study architectural problems. |  |  |  |
| **LO 2** | Knowledge of the determination and definition of different architectural problems and the selection of appropriate design and analysis methods in architecture and related fields. |  |  |  |
| **LO 3** | Knowledge of developing, using and selecting essential modern techniques and devices for architectural projects and effective utilization of information technologies. |  |  |  |
| **LO 4** | Adequate knowledge on architecture; ability of using theoretical and practical knowledge in order to analysis, investigate and solve the architectural problems. |  |  |  |
| **LO 5** | Verbal and literal communication abilities in Turkish and enhancement of foreign languages skills. |  |  |  |
| **LO 6** | Ability of individual study and being member of a team in disciplinary or interdisciplinary studies. |  |  |  |
| **LO 7** | Knowledge of professional and ethical responsibilities. |  |  |  |
| **LO 8** | Knowledge of professional practice in project design and construction; awareness of innovation, sustainable development and enterpreneurship. |  |  |  |
| **LO 9** | Consciousness to necessity of lifelong learning; ability of getting information, pursuing developments in science and self-renovation. |  |  |  |
| **LO 10** | Effects of architectural applications on health, environment and safety on global scale; awarness of national and international standards and legislations for architectural design. |  |  |  |

**Prepared by:** **Date:**      

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011614 | **TITLE** | AESTHETICAL CONTEXT IN ARCHITECTURE DURING THE REPUBLIC PERIOD |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
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| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 2 | | 60 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | The ability to interpret and evaluate The influence of 20th century western architecture over Turkish Architecture in the republican period in the context of social and cultural history development of the period.The ability to evaluate the Architecture of Republican Period in a critical approach. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | Examining the phases of the Turkish architecture and its social, cultural and political aspects with an emphasize on the architectural aesthetics | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Including the most advanced specialized skills and techniques in practice, having the ability to identify problem and to create solution mechanisms for important problmes in the field of architecture and/or innovation in order and to expand and redefine existing knowledge or professional practice required for the synthesis and evaluation. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | Competence for analyze, review and synthesis of the new complex ideas in the field of architecture with a critical approach. | | | | | | | |
| **TEXTBOOK** | | | | | Alsaç, Ü. (1976). Türkiye’deki Mimarlık Düşüncesinin Cumhuriyet Dönemindeki Evrimi. KTÜ Yayınla rı. –Aslanoğlu, İ. (2001). Erken Cumhuriyet Dönemi Mimarlığı 1923-1938. ODTÜ Mimarlık Fakültesi Yayınları. -Balamir, A.; Asatekin, G. (1993). Ulusal Kimlik Sorusu Üzerine Karşıt Düşünceler ve Konut Mimarisi. ODTÜ Mimarlık Fakültesi Dergisi, (11:1-2) 73-88. –Bozdoğan, S. (2002). Modernizm ve Ulusun İnşası. Metis Yayınları. - (1995). Cumhuriyet Dönemi Türkiye Ansiklopedisi, Cumhuriyet Döneminde Türk Mimarlığı. İletişim Yayınları. -Bozdoğan, S.; Özkan, S.; Yenal, E. (ed.) (1987). Sedat Hakkı Eldem, Architect in Turkey. Concept Media. –Kortan, E. (1973). Türkiye’de Mimarlık Hareketleri ve Eleştirisi 1960-1970. Baylan Matbaası. -Holod, R.; Evin, A. (Ed.) (1984). Modern Turkish Architecture (Referans yazılar: İlhan Tekeli, Yıldırım Yavuz, Suha Özkan, Afife Batur, Üstün Alsaç, Mete Tapan, Atilla Yücel, Yıldız Sey.). University of Pennsylvania Press. . | | | | | | | |
| **OTHER REFERENCES** | | | | |  | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction |
| 2 | Turkish Architecture Before the Republic |
| 3 | Turkish Architecture Before the Republic |
| 4 | 19. century Turkish Architecture |
| 5 | Early Republic and the New Architecture |
| 6 | Early Republic and the New Architecture |
| 7 | The Influence of Foreign Architects |
| 8 | 1950's and Modernism |
| 9 | 1960's and 1970's - Post-Modernism and Pluralism |
| 10 | Contemporary Turkish Architecture and Architects |
| 11 | Contemporary Turkish Architecture and Architects |
| 12 | Contemporary Turkish Architecture and Architects - Student Presentations |
| 13 | Contemporary Turkish Architecture and Architects - Student Presentations |
| 14 | Contemporary Turkish Architecture and Architects - Student Presentations |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011613 | **TITLE** | Immovable Cultural Property Legislation in the Light of International Preservation Principles |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | |  | | | | 0 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 3 | | 60 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Examination of preservation legislation with international base and its effects on project and application activities. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | As with all components of the built environment, project and application activities for immovable cultural assets are subject to international legislation and local legislation provisions based on these documents. Although an adequate education on preservation of cultural properties is taken, all projects and applications must be made in accordance with the valid legislation layers. In this course, in the context of reflecting international documents, the Republic of Turkey legislation of immovable cultural properties the contradictions and shortcomings, besides the potential of the legislation with the theoretical background and protection process aims to increase the integral consciousness are targetting. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | -To provide the basic legislation knowledge to reflect the preservation education on the application site;  -To examine the international perspective on the preservation of immovable cultural properties;  -To examine the perspective of the Republic of Turkey legislation on immovable cultural properties. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | -To have knowledge about international preservation legislation;  -To have knowledge about legislation layers about the preservation of cultural property in the Turkish Republic legislation;  -Evaluation of preservation projects and applications from the point of view of legislation. | | | | | | | |
| **TEXTBOOK** | | | | |  | | | | | | | |
| **OTHER REFERENCES** | | | | | All books, dissertations, articles and all sub-legislation texts (regulations, policy decisions, etc.) of Law No. 2863 on Protection of Cultural and Natural Property | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction and course information |
| 2 | What is preservation? Preservation of immovable cultural properties |
| 3 | Development of preservation and preservation legislation in the world |
| 4 | Development of preservation legislation in Turkey |
| 5 | The place of preservation law in general building legislation |
| 6 | The organs of the State responsible for the building and preservation |
| 7 | Comparison of the State organs responsible for the building and preservation with international examples |
| 8 | Evaluation of the preservation legislation with the support of international documents |
| 9 | Evaluation of the preservation legislation with the support of international documents |
| 10 | Evaluation of the preservation legislation with the support of international documents |
| 11 | Student presentations |
| 12 | Student presentations |
| 13 | Student presentations |
| 14 | Student presentations |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011615 | **TITLE** | Construction Contracts and Procurement Methods |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( + ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | |  | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 2 | | 60 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | To gain knowledge about construction contracts and tenders. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | To teach construction contracts and procurement methods.  To investigate the relevant legislation at national and international level.  To teach the rights and responsibilities of the participants in construction contracts and procurement methods. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | Giving information about construction auctions and contracts.  To know the rights and responsibilities of the participants in construction contracts and procurement.  Introduce standard construction contracts and procurement methods. Examining and analyzing case studies related to construction contracts and procurements. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To know the construction contracts and procurement methods.  - Knowing and interpreting construction contracts and procurement documents.  - Knowing national and international procurement and contracting methods. | | | | | | | |
| **TEXTBOOK** | | | | | Collier, K. 2001 Construction Contracts. Upper SAddle River. Nj.. Merrill7Prentice Hall.Construction Specification Institution. 2011. The CSI Project Delivery Practice Guide. Hoboken. Nj. Wiley.Gold, F. and Joyce, N., 2009: Construction Project Management, Third Edition. Pearson Prentice Hall.Schaufelberger, J.E. and Holm, L., 2002: Management of Construction Projects, A Constructor’s Perspective. Prentice Hall. | | | | | | | |
| **OTHER REFERENCES** | | | | | All relevant national and international legislative texts and academic studies. | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction to construction procurement methods and related legislation |
| 2 | Types of construction procurement methods |
| 3 | Development of construction procurement legislation in the world |
| 4 | Development of construction procurement legislation in Turkey |
| 5 | Introduction to construction contracts and types of construction contracts |
| 6 | Introduction to construction contracts and types of construction contracts |
| 7 | Construction contracts and procurement documents: Agreement |
| 8 | Construction contracts and procurement documents: Conditions of the contracts |
| 9 | Construction contracts and procurement documents: Drawings, specifications, addenda |
| 10 | Rights and responsibilities of the construction contract and procurement participants |
| 11 | Rights and responsibilities of the construction contract and procurement participants |
| 12 | Case studies on procurement methods |
| 13 | Case studies on construction contracts |
| 14 | Case studies on dispute resolution |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

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**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **BUILDING SCIENCE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504011615 | **TITLE** | PRINCIPLES OF BUILDING PHYSICS |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 1 | | 2 | | | |  | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | | 1 | | 30 |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 40 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 30 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | The present couse focuses on understanding the primary functions of buildings, code and user requirements. Building physics principles regarding heat, moisture and air, design of thermal and moisture insulation, daylight and artificial lighting, wind, air and rain tightness are the main considerations of this course. These principles are discussed based on material selection and basic principles and calculations used in analysis and design of building assemblies and details. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The present course aims to deliver an understanding of basic building physics in terms of material and systems relations, as well as requirements and influences, relevant to whole building design approach. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | It is expected that the PhD candidates who enroll in this course and pursue research in the related research domain would be able to develop an understanding of the background for building requirements related to users, society and the environment, of the requirements, influences and physical and material relations as a basis for designing assemblies and buildings that fulfill requirements regarding reliability, performance and sustainability and  a sufficient background for communicating with other disciplines (structural engineer, HVAC engineere etc.) involved in design, construction and operation of buildings. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | The PhD candidates enrolled in this course would be able to assess relevant requirements and influences from a building physics perspective, perform analyses and calculations of building physics, calculate power and energy requirements for a building, utilize tools for calculation of hygrothermal transport in assemblies and design efficient heat, moisture and air insulations. | | | | | | | |
| **TEXTBOOK** | | | | | Hens, H. 2012. Building Physics - Heat, Air and Moisture: Fundamentals and Engineering Methods with Examples and Exercises,Ernst & Sohn, Secod Edition, ISBN:9783433030271 | | | | | | | |
| **OTHER REFERENCES** | | | | | Pinteric, M. 2017. Building Physics: From physical principles to international standards, Springer, First Edition, ISBN:978-3319574837 | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction to the Principles of Building Physics |
| 2 | Heat Transfer in Buildings I |
| 3 | Heat Transfer in Buildings II |
| 4 | Heat Transfer in Buildings III |
| 5 | Moisture Transfer in Buildings I |
| 6 | Midterm Examination 1 |
| 7 | Moisture Transfer in Buildings II |
| 8 | Daylight and Artificial Lighting |
| 9 | Mass Transfer in Buildings I |
| 10 | Mass Transfer in Buildings II |
| 11 | Midterm Examination 2 |
| 12 | Acoustics |
| 13 | Assessment of Whole Building Heat, Moisture and Mass Transfer |
| 14 | Assessment of Whole Building Heat, Moisture and Mass Transfer |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE       PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Knowledge of design, making, data collection, analysis of outcomes and interpretations of them in order to study architectural problems. |  |  |  |
| **LO 2** | Knowledge of the determination and definition of different architectural problems and the selection of appropriate design and analysis methods in architecture and related fields. |  |  |  |
| **LO 3** | Knowledge of developing, using and selecting essential modern techniques and devices for architectural projects and effective utilization of information technologies. |  |  |  |
| **LO 4** | Adequate knowledge on architecture; ability of using theoretical and practical knowledge in order to analysis, investigate and solve the architectural problems. |  |  |  |
| **LO 5** | Verbal and literal communication abilities in Turkish and enhancement of foreign languages skills. |  |  |  |
| **LO 6** | Ability of individual study and being member of a team in disciplinary or interdisciplinary studies. |  |  |  |
| **LO 7** | Knowledge of professional and ethical responsibilities. |  |  |  |
| **LO 8** | Knowledge of professional practice in project design and construction; awareness of innovation, sustainable development and enterpreneurship. |  |  |  |
| **LO 9** | Consciousness to necessity of lifelong learning; ability of getting information, pursuing developments in science and self-renovation. |  |  |  |
| **LO 10** | Effects of architectural applications on health, environment and safety on global scale; awarness of national and international standards and legislations for architectural design. |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

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**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012605 | **TITLE** | DISASTER MANAGEMENT IN THE BUILT ENVIRONMENT |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | |  |  | | | 3 | 7,5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | TURKISH |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
| 1 | | 1 | | | | 1 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 1 | | 40 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 60 |
| **PREREQUISITE(S)** | | | | | ------ | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | The issues that need to be considered in terms of disaster management in the built environment and the role of the architect in the design of the built environment (temporary - permanent built environment) before and after the disaster will be investigated. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | In architectural design, it is aimed to realize, examine and make inferences that the measures to be taken against disasters start with architectural design by becoming aware of the forms, materials and technologies that ensure the resilience of the built environment against disasters. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | To comprehend the role of the architect in the selection of form and material in the design of the built environment and to understand the importance of design decisions. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | To recognize the behavior of the built environment in the impact of disasters, to understand the importance of form and material selection in durable building design, to be aware of the importance of disaster impact in architectural design. To emphasize the importance of process management in the formation of temporary and permanent built environment after disasters. | | | | | | | |
| **TEXTBOOK** | | | | | Tuna M. E., 'Depreme Dayanıklı Yapı Tasarımı', Ajans Türk Basın ve Basım AŞ., 2000. Beyhan F., Civelek E., Çetin S., Sarı Y.D. Temel Yangın Güvenliği, Anadolu Üniversitesi Yayınları, 2019. Çebi S., Afetlerde Risk ve Kriz Yönetimi, Atatürk Üniversitesi yayınları, 2019. | | | | | | | |
| **OTHER REFERENCES** | | | | |  | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Introduction to course content and functioning |
| 2 | Brief introduction of disaster-resistant built environmental design, presentation and assignment topics |
| 3 | Evaluation of the role and importance of disaster regulations in the architectural design process |
| 4 | Earthquake resistant building design and the general behavior of the construction system |
| 5 | Selection of structure, material and location in superstructure and infrastructure design in flood, tsunami, erosion disasters |
| 6 | Fire resistant built environmental design, structure, material selection and planning principles |
| 7 | Discussion of assignments |
| 8 | Post-disaster temporary housing applications, examination and discussion through examplesPost-disaster permanent housing applications, examination and discussion through examples |
| 9 | ost-disaster permanent housing applications, examination and discussion through examplesPost-disaster permanent housing applications, examination and discussion through examples |
| 10 | Post-disaster damage assessment and post-disaster process management in the built environment |
| 11 | Discussion of repair and reinforcement issues against post-disaster damage |
| 12 | Examination of built environmental designs and applications with examples before and after disasters in the world |
| 13 | Examination of built environmental designs and applications with examples before and after disasters in the Turkey |
| 14 | Afet öncesi ve sonrası yapılı çevre tasarımına yönelik önerilerin tartışılması |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** **Date:**

**Signature**:

**T.R.**

**ESKISEHIR OSMANGAZI UNIVERSITY**

**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**

**COURSE INFORMATION FORM**

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| **DEPARTMENT** | **ARCHITECTURE (PhD)** | **SEMESTER** |  |

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| **COURSE** | | | |
| **CODE** | 504012609 | **TITLE** | Adaptive Facades |

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| **LEVEL** | **HOUR/WEEK** | | | | | | **Credit** | **ECTS** | **TYPE** | | | **LANGUAGE** |
| **Theory** | | **Practice** | **Laboratory** | | |
| **PhD** | 3 | | 0 | 0 | | | 3 | 5 | COMPULSORY  (   ) | | ELECTIVE  ( X ) | Turkish |
| **CREDIT DISTRIBUTION** | | | | | | | | | | | | |
| **Basic Science** | | **Basic Engineering** | | | | **Knowledge in the discipline**  **[if it contains considerable design content, mark with (√)]** | | | | | | |
|  | | 1 | | | | 2 | | | | | | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **SEMESTER ACTIVITIES** | | | | | **Evaluation Type** | | | | | **Number** | | **Contribution**  **( % )** |
| Midterm | | | | |  | |  |
| Quiz | | | | |  | |  |
| Homework | | | | | 3 | | 60 |
| Project | | | | |  | |  |
| Report | | | | |  | |  |
| Seminar | | | | |  | |  |
| Other (………) | | | | |  | |  |
| **Final Examination** | | | | | | | 40 |
| **PREREQUISITE(S)** | | | | |  | | | | | | | |
| **SHORT COURSE CONTENT** | | | | | Facades, part of the building envelope, are considered a significant buildign element for facilitating indoor environmental control, decreasing energy consumption and related CO2 emissions. Thermal, visual and acoustic comfort and ventilation are regulated through facades, thus the balance between the indoor environment and the immediate climatic effects can be evaluated as a dynamic parameter due to the innovaitons in adaptive facades. Optimization of the tasks, such as simultaneously controlling solar radiation and provision of adequate daylight levels, require a thorough understanding of the design, construction and evaluation proinciples of adaptive facades and this course delivers these notions to PhD candidates. | | | | | | | |
| **COURSE OBJECTIVES** | | | | | The objectives of the course focus on delivering the knowledge on adaptive materials and systems that can be used in facade design and the evaluation of design options through simulation and prototype applications. | | | | | | | |
| **COURSE CONTRIBUTION TO THE PROFESSIONAL EDUCATION** | | | | | The course contributes academic and professional education via introducing novel approaches in facade design. | | | | | | | |
| **LEARNING OUTCOMES OF THE COURSE** | | | | | PhD candidates are expected to;  1. Comprehend the novel materials and technologies that facilitate adaptive features in facade design.  2. Acquire the interdisciplinary knowledge pertaining to the integration of these materials and systems in the facade.  3. Evaluate problem-oreinted design development for adaptive facades.  4. Understand the potentials of related software in the optimization of adaptive facades. | | | | | | | |
| **TEXTBOOK** | | | | | Favoino et al., 2018, Building Performance Simulation and Characterisation of Adaptive Facades - Adaptive Facades Network, TU Delft OpenAeleini vd.,2018, Case Studies – Adaptive Facade Network, TU Delft Open | | | | | | | |
| **OTHER REFERENCES** | | | | | Tabadkani et al., 2021, Design approaches and typologies of adaptive facades: A review, Automation in Construction, Volume 121, January 2021, 103450Nagy et al., 2016, The Adaptive Solar Facade: From concept to prototypes, Frontiers of Architectural Research, Volume 5, Issue 2, June 2016, Pages 143-156Iommi, 2018, The mediterranean smart adaptive wall. An experimental design of a smart and adaptive facade module for the mediterranean climate,Energy and Buildings, Volume 158, 1 January 2018, Pages 1450-1460Gallo and Romano, 2017, Adaptive Facades, Developed with Innovative Nanomaterials, for a Sustainable Architecture in the Mediterranean Area, Procedia Engineering, Volume 180, 2017, Pages 1274-1283Tabadkani et al., 2020, A review of automatic control strategies based on simulations for adaptive facades, Building and Environment, Volume 175, 15 May 2020, 106801Attia et al., 2018, Current trends and future challenges in the performance assessment of adaptive façade systems, Energy and Buildings, Volume 179, 15 November 2018, Pages 165-182Loonen et al., 2013, Climate adaptive building shells: State-of-the-art and future challenges, Renewable and Sustainable Energy Reviews, Volume 25, September 2013, Pages 483-493 | | | | | | | |

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| **COURSE SCHEDULE (Weekly)** | |
| **WEEK** | **TOPICS** |
| 1 | Adaptive Facades: Definitions and Scope |
| 2 | Adaptive Facades Performance Criteria |
| 3 | Adaptive Materials: Dynamic Glazing I |
| 4 | Adaptive Materials: Dynamic Glazing II |
| 5 | Adaptive Materials: Phase Change Materials |
| 6 | Adaptive Systems: Dynamic Shading Design I |
| 7 | Adaptive Systems: Dynamic Shading Design II |
| 8 | Midterm - Homework |
| 9 | Adaptive Systems: Natural Ventilation |
| 10 | Adaptive Systems: Acoustic Control |
| 11 | Modeling and Simulation of Adaptive Facades: Grashopper / LadyBug /Rhinoceros I |
| 12 | Modeling and Simulation of Adaptive Facades: Grashopper / LadyBug /Rhinoceros II |
| 13 | Modeling and Simulation of Adaptive Facades: Grashopper / LadyBug /Rhinoceros III |
| 14 | Modeling and Simulation of Adaptive Facades: Grashopper / LadyBug /Rhinoceros IV |
| 15,16 | Final Examination |

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| **CONTRIBUTION OF THE COURSE LEARNING OUTCOMES TO THE ARCHITECTURE PhD PROGRAM LEARNING OUTCOMES** | | **CONTRIBUTION LEVEL** | | |
| **NO** | **LEARNING OUTCOMES (PhD)** | **3**  High | **2**  Mid | **1**  Low |
| **LO 1** | Ability to develop and deepen the current and advanced knowledge in the field of original ideas and / or research at the level of expertise, based on master degree qualifications |  |  |  |
| **LO 2** | Ability to understand the interdisciplinary interaction related to the field; reach original results utilising advanced knowledge in analysis, synthesis and evaluation of new and complex ideas |  |  |  |
| **LO 3** | Ability to evaluate and use new information in a systematic approach |  |  |  |
| **LO 4** | Knowledge of developing original ideas, methods, design and / or applications and apply common idea ,method, design and / or application to a different field; and of doing research , comprehend , design and adapt unique ideas |  |  |  |
| **LO 5** | Ability to take the lead in the area that require the analysis of original and interdisciplinary problems |  |  |  |
| **LO 6** | Ability to be an expert and actualize theoretical and practical studies at an academic level , comprehend research methodologies and approaches related to design research areas. |  |  |  |
| **LO 7** | Knowledge of scientific norms and standards in research and publication; and of information on ethical knowledge and responsibilities. |  |  |  |
| **LO 8** | Knowledge of meta-cognitive processes like creative and critical thinking, problem solving and decision-making, and of developing novel ideas and methods on related research areas. |  |  |  |
| **LO 9** | Ability to defend original ideas and to communicate effectively with experts in international platforms. |  |  |  |
| **LO 10** | Ability to control the stages of collecting, interpreting, applying and announcing data related to architectural design by considering social, scientific, cultural and ethical values and teach these values; to develop strategy, policy and implementation strategies and to evaluate the obtained results within the framework of quality processes . |  |  |  |

**Prepared by:** Assoc. Prof. Dr. Başak GÜÇYETER **Date:** November 4, 2022