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| Course Details |
| Code | **Academic Year** | **Semester** |
| BE014 | 2021-2022 |  |
| Title | **T** | **A** | **L** | **ECTS** |
| Multi-Criteria Decision Making | 3 | 1 | 0 | 10 |
|  |
| Language | English |
| Level | **Master** |  | **Doctorate** | **X** |
| Department / Program | PhD in Business and Economics |
| Forms of Teaching and Learning |  |
| Course Type | **Compulsory** |  | **Elective** | **X** |
| Objectives | The aim of this course is to provide the students with the knowledge of various multi-criteria decision making methods, which are most encountered in the literature, and to teach how these are applied to business problems. |
| Content | Introduction to decision theory, general information about multi-criteria decision making methods and classification of these methods, overview of various criteria weight calculation methods, explanation of the methods specified in the weekly content and their applications |
| Prerequisites |  |
| Coordinator |  |
| Lecturer(s) |  |
| Assistant(s) |  |
| Work Placement |  |
| Recommended or Required Reading |
| Books / Lecture Notes | Tzeng, G. H., Huang, J.J., Multiple Attribute Decision Making Methods and Applications, CRC Press, 2011.Alinezhad A., Khalili, J. New Methods and Applications in Multiple Attribute Decision Making (MADM), Springer, 2019.Özbek, A. , Çok Kriterli Karar Verme Yöntemleri ve Excel ile Problem Çözümü Kavram-Teori-Uygulama, Seçkin Yayıncılık, 2017. |
| Other Sources |  |
| Additional Course Material |
| Documents |  |
| Assignments |  |
| Exams |  |
| Course Composition |
| Social Sciences |  | 40% |
| Educational Sciences |  | % |
| Natural Sciences |  | % |
| Health Sciences |  | % |
| Expert Knowledge |  | 60% |
| Assessment |
| Activity | **Count** | **Percentage (%)** |
| Midterm Exam | 1 | 40% |
| Quiz |  | % |
| Assignments |  | % |
| Attendance |  | % |
| Recitations |  | % |
| Projects |  | % |
| Final Exam | 1 | 60% |
| Total | **100** |
| ECTS Points and Work Load |
| Activity | **Count** | **Duration** | **Work Load (Hours)** |
| Lectures | 14 | 3 | 42 |
| Self-Study | 14 | 4 | 56 |
| Assignments |  |  |  |
| Presentation / Seminar Preparation | 2 | 30 | 60 |
| Midterm Exam | 1 | 44 | 44 |
| Recitations | 14 | 1 | 14 |
| Laboratory |  |  |  |
| Projects |  |  |  |
| Final Exam | 1 | 64 | 64 |
| Total Work Load | **280** |
| ECTS Points (Total Work Load / 28)  | **10** |
| Course Learning Outcomes |
| 1 | Students acquire knowledge about various decision making methods. |
| 2 | Students can apply these methods. |
| Weekly Content |
| 1 | Introduction to decision theory |
| 2 | General information about multi-criteria decision making methods and classification of these methods, overview of various criteria weight calculation methods |
| 3 | Analytical Hierarchy Process |
| 4 | Analytical Network Process |
| 5 | VIKOR |
| 6 | TOPSIS |
| 7 | ELECTRE |
| 8 | PROMETHEE |
| 9 | Midterm Exam |
| 10 | MOORA and MULTIMOORA |
| 11 | ARAS, COPRAS |
| 12 | OCRA |
| 13 | Gray relational analysis |
| 14 | EATWIOS |
| 15 | Data Envelopment Analysis |
| Contribution of Learning Outcomes to Program Objectives (1-5) |
| CLO | **P1** | **P2** | **P3** |
| 1 | 5 | 5 | 5 |
| 2 | 5 | 5 | 5 |
| Contribution Level | 1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High |
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| Compiled by: | Dr. Mehmet Hakan Özdemir |
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