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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course Details | | | | | | | | | | | | | | | | | | | |
| Code | | | | | | | | | | | | | | **Academic Year** | | | | | **Semester** |
| BE021 | | | | | | | | | | | | | | 2021-2022 | | | | |  |
| Title | | | | | | | | | | | | | | **T** | **A** | | **L** | | **ECTS** |
| Multivariate Statistical Methods | | | | | | | | | | | | | | 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 | | | | | In this course, students learn about multivariate statistical methods and apply them. | | | | | | | | | | | | | | |
| Content | | | | | General information about multivariate statistical methods and the assumptions encountered in these methods, multiple regression analysis, logistic regression analysis, discriminant analysis, conjoint analysis, multivariate analysis of variance and covariance, canonical correlation analysis, factor analysis, clustering analysis, correspondence analysis, multidimensional scaling, reliability analysis, structural equation modeling | | | | | | | | | | | | | | |
| Prerequisites | | | | |  | | | | | | | | | | | | | | |
| Coordinator | | | | |  | | | | | | | | | | | | | | |
| Lecturer(s) | | | | |  | | | | | | | | | | | | | | |
| Assistant(s) | | | | |  | | | | | | | | | | | | | | |
| Work Placement | | | | |  | | | | | | | | | | | | | | |
| Recommended or Required Reading | | | | | | | | | | | | | | | | | | | |
| Books / Lecture Notes | | | Alpar, R., Uygulamalı Çok Değişkenli İstatiksel Yöntemler, Detay Yayıncılık, 2013.  Orhunbilge, N., Çok Değişkenli İstatistik Yöntemler, İstanbul Üniversitesi Yayınları, 2010. | | | | | | | | | | | | | | | | |
| 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 multivariate statistical methods. | | | | | | | | | | | | | | | | | | |
| 2 | Students can apply multivariate statistical methods. | | | | | | | | | | | | | | | | | | |
| Weekly Content | | | | | | | | | | | | | | | | | | | |
| 1 | General information about multivariate statistical methods and the assumptions encountered in these methods | | | | | | | | | | | | | | | | | | |
| 2 | Multiple regression analysis | | | | | | | | | | | | | | | | | | |
| 3 | Logistic regression analysis | | | | | | | | | | | | | | | | | | |
| 4 | Discriminant analysis | | | | | | | | | | | | | | | | | | |
| 5 | Conjoint analysis | | | | | | | | | | | | | | | | | | |
| 6 | Multivariate analysis of variance | | | | | | | | | | | | | | | | | | |
| 7 | Multivariate analysis of covariance | | | | | | | | | | | | | | | | | | |
| 8 | Canonical correlation analysis | | | | | | | | | | | | | | | | | | |
| 9 | Midterm Exam | | | | | | | | | | | | | | | | | | |
| 10 | Factor analysis | | | | | | | | | | | | | | | | | | |
| 11 | Clustering analysis | | | | | | | | | | | | | | | | | | |
| 12 | Correspondence analysis and multidimensional scaling | | | | | | | | | | | | | | | | | | |
| 13 | Reliability analysis | | | | | | | | | | | | | | | | | | |
| 14 | Structural equation modeling | | | | | | | | | | | | | | | | | | |
| 15 | Structural equation modeling | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | |
| Compiled by: | | Dr. Mehmet Hakan Özdemir | | | | | | | | | | | | | | | | | |
| Date of Compilation: | | 16.05.2021 | | | | | | | | | | | | | | | | | |