# Content

| Course Code | Course Name | Semester | Theory | Practice | Lab | Credit | ECTS |
|---|---|---|---|---|---|---|---|
| LFM 533 | Multi-Criteria Decision Making and Its Applications in Logistics | 1 | 3 | 0 | 0 | 3 | 6 |

| | |
|---|---|
| Prerequisites | |
| Admission Requirements | |

| | |
|---|---|
| Language of Instruction | English |
| Course Type | Elective |
| Course Level | Masters Degree |
| Objective | The purpose of this course is to provide the students an introduction to the concept of Multi-Criteria Decision Making (MCDM) and its general areas of application and its applications in logistics by showing the basics and methods. |
| Content | Week 1. MCDM – A General Overview, Basic Definitions, Normalization Classification of MCDM Methods Week 2. Quantitative/Qualitative Data, Attribute Generation and Weighting Week 3. Quantification of Qualitative Data Non Compensatory MCDM Methods - I Week 4. Non Compensatory MCDM Methods - II, Scoring Methods SAW, WPM Week 5 Some well known MCDM methods – AHP, TOPSIS Week 6. Some well known MCDM methods – ELECTRE, OCRA Week 7. Some well known MCDM Methods – GRA, MOORA, DEA Week 8. MIDTERM Week 9. Some well known MCDM Methods – DEMATEL, ANP Week 10. Group Decision Making, Social Choice Functions Week 11. General Overview of Fuzzy Set Theory Week 12. General overview of Fuzzy MCDM Week 13. Project Presentations Week 14. Project Presentations |
| References | K. Paul YOON, Ching-Lai HWANG, Multiple Attribute Decision Making – An Introduction, Sage Publications, California, USA, 1995. Ching-Lai HWANG, Ming-Jeng Lin, Group Decision Making under Multiple Criteria, Springer Verlag, New York, USA, 1987. Enrique BALLESTERO, Carlos ROMERO, Multiple Criteria Decision Making and its Applications to Economic Problems, Kluwer Academic Publishers, Boston,USA, 1998. Thomas L. SAATY, Müjgan S. ÖZDEMİR, A Dictionary of Decisions with Dependence and Feedback Based on the Analytic Network Process, RWS Publications, Pittsburgh, USA, 2005. |

## Theory Topics

| Week | Weekly Contents |
|---|---|
| | |