## Course Syllabus

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| **Code - Course Title** | **MTE532 - Mathematical Tasks and Applications in Mathematics Education** |
| **Course Type** | II. SEMESTER |
| **Laboratory + Practice** | 3+0 |
| **ECTS** | **6.0** |
| **Language of Instruction** | Türkçe |
| **Course Type** | Elective Courses |
| **Course Instructor(s)** | DR. ÖĞR. ÜYESİ OSMAN BAĞDAT |

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| **Mode of Delivery** | This course is conducted as "face to face" |
| **Prerequisites** | There is no prerequisite or co-requisite for this course. |
| **Courses Recomended** | There is no recommended optional program component for this course. |
| **Recommended Resources** | Dede, Y., Doğan, M. F. ve Aslan-Tutak, F. (2020). Matematik eğitiminde etkinlikler ve uygulamaları, Ankara: Pegem Akademi. |
| **Work Placement** | N/A |

## Course Syllabus

| Weeks | Learning Outcomes | Topics | Teaching Methods |
|---|---|---|---|
| **Week - 1** | | What are "Mathematical Task" and "Mathematical Activity"? | |
| **Week - 2** | | Theoretical and Philosophical Foundations of Mathematical Tasks | |
| **Week - 3** | | History of Mathematical Tasks in Mathematics Education | |
| **Week - 4** | | Common Features of Mathematical Tasks | |
| **Week - 5** | | Design Principles of Mathematical Tasks | |
| **Week - 6** | | The Cognitive Demand of Mathematical Tasks | |
| **Week - 7** | | Implementing Mathematical Tasks in the Classroom | |
| **Week - 8** | | Implementing Mathematical Tasks in the Classroom | |
| **Week - 9** | | Noticing Students' Strategies in Task-Based Instruction | |
| **Week - 10** | | Mathematical Literacy Tasks | |
| **Week - 11** | | Mathematical Modeling Tasks | |
| **Week - 12** | | Mathematical Tasks Based on Interdisciplinary Approach | |
| **Week - 13** | | Mathematical Proof Tasks | |

## Course Syllabus

| Weeks | Learning Outcomes | Topics | Teaching Methods |
|---|---|---|---|
| **Week - 14** | | Providing Equal Opportunities in Implementing Mathematical Tasks | |

## Learning Outcomes

| # | Learning Outcome |
|---|---|
| **1** | At the end of this course, mathematics teachers and mathematics educators will 1) have theoretical knowledge about the concept of task and activity, their types, characteristics, and levels, 2) will examine the researches about the implementation of tasks in the classroom, 3) will be able to design and implement tasks within the framework of task design and implementation principles. |

## Sustainable Development Goals

*No content has been provided.*

## Course Theme

*No content has been provided.*

## AKTS Workload

| Activity | Duration (Hour) | Count | Workload |
|---|---|---|---|
| Teorik Derse Katılım | 0 | 0 | 0 |
| Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı) | 0 | 0 | 0 |
| Ödevler | 0 | 0 | 0 |
| Proje - Rapor - Sunum Hazırlama | 0 | 0 | 0 |
| Ara Sınav Hazırlığı (sınav süresi dahil) | 0 | 0 | 0 |
| Final Sınavı Hazırlığı (sınav süresi dahil) | 0 | 0 | 0 |
| Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.) | 0 | 0 | 0 |
| Staj Uygulaması | 0 | 0 | 0 |
| | | **Calculated ECTS** | **0** |

## Assessment Method and Passing Requirements

*No content has been provided.*