

**Graduate School of Health Sciences / Microbiology Ph.D.**  
**2024 - 2025 Academic Year**  
**FURTHER TOPICS in SCIENTIFIC RES. PRO. PREPARATION**  
**Syllabus**

| Course Description   |  |   |                         |                           |      |
|--|--|---|-------------------------|---------------------------|------|
| Name   | Code   | Semester  | T+A Hour                | Credit                    | ECTS |
| FURTHER TOPICS in SCIENTIFIC RES. PRO. PREPARATION   | MKBD1214021  | Spring Semester   | 2+0                     | 2                         | 6    |
| <b>Prerequisites Courses</b>   |  |   |                         |                           |      |
| <b>Recommended Elective Courses</b>  |  |   |                         |                           |      |
| <b>Language of Instruction</b>   | Turkish  |   |                         |                           |      |
| <b>Course Level</b>  | Third Cycle (Doctorate Degree)   |   |                         |                           |      |
| <b>Course Type</b>   | Elective   |   |                         |                           |      |
| <b>Course Coordinator</b>  | Assoc.Prof. Mehmet Şerif AYDIN   |   |                         |                           |      |
| <b>Name of Lecturer(s)</b>   | Assoc.Prof. Mehmet Şerif AYDIN   |   |                         |                           |      |
| <b>Assistant(s)</b>  | Scientific project preparation guidelines prepared by Tubitak.   |   |                         |                           |      |
| <b>Aim</b>   | Original value, scientific method, work-schedule, project resource planning, etc. related to scientific research project preparation and management. recognizing the concepts, interpreting the project evaluation criteria as innovation and applying the stages of preparing a scientific project proposal, especially applying the thesis and graduation projects into scientific research projects.  |   |                         |                           |      |
| <b>Course Content</b>  | This course contains; Course Introduction,How to Prepare Basic Concepts and 1002 Scientific Research Projects?,ARDEB Project Evaluation Criteria and a Useful Tool in Scientific Writing: MENDELEY,,Discussion and Maturation of Possible Project Topics,Determination of Project Topics,Protection and Support of Intellectual Property Rights,Determination of Project Topics,Group Work: Project Application Preparation,Group Work: Project Application Preparation,Group Work: Project Application Preparation,Group Work: Project Application Preparation,Group Work: Project Application Preparation. |   |                         |                           |      |
| <b>Course Learning Outcomes</b>  |  |   | <b>Teaching Methods</b> | <b>Assessment Methods</b> |      |
| Describes the purpose of the course, the outputs and sub-skills of the course, the general qualifications related to the course, the thesis calendar and the project preparation calendar, the calendar for the application of the project, the roles of the student and the thesis advisor, recommendations to the students, weekly lesson plans. |  |   | 2                       | A, E, F                   |      |
| Describes the web site of TUBITAK's support programs, learns about ARDEB, BİDEB, UIDB, BTB, TEYDEB programs within the organizational structure of TUBITAK, learns to use TUBITAK program wizard and call wizard.  |  |   | 2                       | A, E, F                   |      |
| Have knowledge about the graduate scholarships provided by TÜBİTAK for students and explain the statistics of BİDEB.   |  |   | 2                       | A, E, F                   |      |
| Explains the conditions for participation as a student under the following headings about the scientific research support provided by TÜBİTAK for students.  |  |   | 2                       | A, E, F                   |      |
| Explain the concepts of science, technology, innovation, invention, entrepreneurship.  |  |   | 12, 2                   | A, E, F                   |      |
| Demonstrates the cyclical relationships between the concepts of science, technology, innovation, invention and entrepreneurship.   |  |   | 12, 2                   | A, E, F                   |      |
| Explains scientific research, experimental research, etc.  |  |   | 12, 2                   | A, E                      |      |
| Within the scope of ARDEB Evaluation Criteria; 3.1. Learns about evaluation criteria (original value, method, project management, pervasive impact, level of innovation, career impact) on the basis of ARDEB programs.  |  |   | 12, 2                   | A, E, F                   |      |
| Explains current programs in scientific project writing.   |  |   | 12, 2                   | A, E, F                   |      |
| Evaluates Tübitak 1001 project.  |  |   | 12, 2                   | A, E, F                   |      |
| Explains the rules of working with the thesis advisor.   |  |   | 12, 2                   | A, E, F                   |      |
| Explain the concepts of copyright, patent and utility model, industrial design and geographical indications and distinguish their differences.   |  |   | 12, 2                   | A, E, F                   |      |
| <b>Teaching Methods</b>  | 12: Problem Solving Method, 2: Project Based Learning Model  |   |                         |                           |      |
| <b>Assessment Methods</b>  | A: Traditional Written Exam, E: Homework, F: Project Task  |   |                         |                           |      |
| <b>Lecture Schedule</b>  |  |   |                         |                           |      |
| <b>Sequence</b>  | <b>Topics</b>  | <b>Preliminary Preparation</b>  |                         |                           |      |
| 1  | Course Introduction  | The aim of the course, learning outcomes and sub-skills, general qualifications, expected outcomes at the end of the semester, thesis and project preparation calendar, the calendar for the official application of the project, the roles of the student and thesis advisor, student recommendations and weekly lesson plan Which Support Programs of TÜBİTAK Should We Apply? TÜBİTAK website, TÜBİTAK organizational structure: ARDEB, BİDEB, UIDB, BTB, TEYDEB, program wizard, call wizard Scholarships Provided by TÜBİTAK for Students: Postgraduate scholarship and BİDEB statistics Scientific Research Support Provided by TÜBİTAK for Students: project management, project scholarship, ARDEB statistics Academic Entrepreneurship: 1512 and the introduction of the Entrepreneurship Center |                         |                           |      |
| 2  | How to Prepare Basic Concepts and 1002 Scientific Research Projects?   | Basic Concepts: Science, technology, innovation, invention, entrepreneurship concepts, The cyclical relationship between the concepts of science, technology, innovation, invention, entrepreneurship, Scientific research, R&D, experimental research etc., The role of scientific research methods How to Prepare a 1002 Scientific Research Project? IMRAD-BAP similarity, filling out the application file, checklist   |                         |                           |      |
| 3  | ARDEB Project Evaluation Criteria and a Useful Tool in Scientific Writing: MENDELEY  | ARDEB Project Evaluation Criteria: Original value, method, project management, pervasive impact, competence level, career impact A Useful Tool in Scientific Writing: MENDELEY: Applied literature and patent search with Mendeley  |                         |                           |      |
| 4  |  | Successful Project Examples: Examination of 1001 files according to evaluation criteria   |                         |                           |      |
| 5  | Discussion and Maturation of Possible Project Topics   |   |                         |                           |      |
| 6  | Determination of Project Topics  | Determination of Project Topics: Opening and Using an Account for TTO BYS   |                         |                           |      |
| 7  | Protection and Support of Intellectual Property Rights   |   |                         |                           |      |
| 8  | Determination of Project Topics  | Determination of Project Topics: Appointment of TTO expert for project preparation, determination of thesis advisor   |                         |                           |      |
| 9  | Group Work: Project Application Preparation  |   |                         |                           |      |

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| <b>Lecture Schedule</b>   |   |                                |
|---------------------------|---|--------------------------------|
| <b>Sequenc<br/>e</b>      | <b>Topics</b>                               | <b>Preliminary Preparation</b> |
| 10                        | Group Work: Project Application Preperation |                                |
| 11                        | Group Work: Project Application Preperation |                                |
| 12                        | Group Work: Project Application Preperation |                                |
| 13                        | Group Work: Project Application Preperation |                                |
| 14                        | Group Work: Project Application Preperation |                                |
| <b>Evaluation Methods</b> |   | <b>Weight(%)</b>               |
| Midterm Exam              |   | 50                             |
| General Exam              |   | 50                             |

| <b>Resources</b>  |
|---|
| <p>1.Bilimsel Bir Araştırma Ödevi Nasıl Hazırlanır? Türker Baş 2.Bilimsel Bir Makale Nasıl Yazılır ve Yayınlanır? Robert A. Day, TÜBİTAK, 1996 3.A Roadmap for Graduate Students, Ünel Mustafa, Soğukpınar İbrahim 4.Ar-Ge Mucizesi, TÜBİTAK Yayınları 5.Yenilikçilik, Harward Business Review, MESS Yayınları 6.Teknoloji Yönetimi, David Probert, Elif Yayınevi, 2013 7.21. Yüzyılda Teknoloji ve Yenilik / İnovasyon ve Yönetimi, Tarık Baykara, Nobel Akademik Yayıncılık, 2014 8.Tasarım, Teknoloji, İş ve Yaşamda Başarı İçin Basitlik Kanunları, John Maeda, Mediacat Yayıncılık, 2012 9.Ar-Ge Mucizesi, TÜBİTAK Yayınları 10.Yenilikçilik, Harward Business Review, MESS Yayınları 11.Alan Barker - Yenilikçiliğin Simyası, MESS Yayınları 12.Chris Freeman, Luc Soete - Yenilik İktisadı, TÜBİTAK Yayınları 13.Paul Trott - Innovation Management and New Product Development, Prentice Hall 14.Tom Burns, G.M. Stalker - The Management of Innovation, Tavistock Publications 15.Tom Kelley - Yenilikçilik Sanatı, Eczacıbaşı Yayınları</p> <p>□<br/>Bilimsel Araştırma Yöntemleri<br/>İZÜ Yayınları (İstanbul Zaim Üniversitesi)</p> <p>MODERN BİLİMSEL ARAŞTIRMA YÖNTEMLERİ<br/>Prof. Dr. Kazım Özdamar</p> |