

**International School of Medicine / Medicine (English)**

**2023 - 2024 Academic Year**

**SCIENTIFIC RESEARCH PROJECTS III**

**Syllabus**

| Course Description  |  |                                |                         |                           |      |
|---|--|--------------------------------|-------------------------|---------------------------|------|
| Name  | Code   | Semester                       | T+A Hour                | Credit                    | ECTS |
| SCIENTIFIC RESEARCH PROJECTS III  | ISM3015439   | Yearly                         | 0+128                   | 0                         | 4    |
| <b>Prerequisites Courses</b>  | BİLİMSEL ARAŞTIRMA PROJELERİ II; BİLİMSEL ARAŞTIRMA PROJELERİ II   |                                |                         |                           |      |
| <b>Recommended Elective Courses</b>   | Scientific Research Project I  |                                |                         |                           |      |
| <b>Language of Instruction</b>  | English  |                                |                         |                           |      |
| <b>Course Level</b>   | First Cycle (Bachelor's Degree)  |                                |                         |                           |      |
| <b>Course Type</b>  | Elective   |                                |                         |                           |      |
| <b>Course Coordinator</b>   | Assoc.Prof. Nihal KARAKAŞ  |                                |                         |                           |      |
| <b>Name of Lecturer(s)</b>  | Assoc.Prof. Esra DEMİR, Assoc.Prof. Nihal KARAKAŞ  |                                |                         |                           |      |
| <b>Assistant(s)</b>   | Dr.Öğr.Üye.Esra DEMİR  |                                |                         |                           |      |
| <b>Aim</b>  | To learn study designs, to be able to prepare a research protocol, to recognize the original values, work-timetable, project resource planning, etc. related to the preparation and management of scientific research projects, to interpret the project evaluation criteria for innovation and to implement the stages of preparing scientific project proposals, especially to implement the scientific research projectization of thesis and finishing projects.  |                                |                         |                           |      |
| <b>Course Content</b>   | This course contains; Introduction to scientific research, evidence-based data, hypothesis, Study Designs, Observational Studies, Cross-Sectional Studies, Experimental Studies, Errors and Bias in Scientific Research, Checklists for Research, Preparation of Research Protocols, International and National Research Project Support Programs with the Technology Transfer Office (TTO), Research Project Support Program for Undergraduate Students with the TTO, Proposals of Successful Medical Projects with the TTO, Literature Review for patenting and Using Reference Tools with the TTO, Group Work: Discussing Project Proposals with the TTO, The Role of Biostatistics in Medical Research, Group Work: Statistical and methodological assessment of Proposals, Group Discussions with the TTO, Working with advisors / Conducting Research. |                                |                         |                           |      |
| <b>Course Learning Outcomes</b>   |  |                                | <b>Teaching Methods</b> | <b>Assessment Methods</b> |      |
| 1. Define the types of study design, errors, and bias in scientific research<br>2. Explain the basic components of a research protocol and how to prepare it.<br>3. Describe the main national and international scientific Research & Development support and apply for scientific Research & Development<br>4. Clarify national and international project support and National Research Project<br>5. Support Program for Undergraduate Students and applies for relevant project support<br>5. Prepare and present a scientific project from the idea stage to its completion. |  |                                | 10, 16, 17, 18, 2, 9    | E, F, H                   |      |
| <b>Teaching Methods</b>   | 10: Discussion Method, 16: Question - Answer Technique, 17: Experimental Technique, 18: Micro Teaching Technique, 2: Project Based Learning Model, 9: Lecture Method   |                                |                         |                           |      |
| <b>Assessment Methods</b>   | E: Homework, F: Project Task, H: Performance Task  |                                |                         |                           |      |
| <b>Lecture Schedule</b>   |  |                                |                         |                           |      |
| <b>Sequence</b>   | <b>Topics</b>  | <b>Preliminary Preparation</b> |                         |                           |      |
| 1   | Introduction to scientific research, evidence-based data, hypothesis   | ----                           |                         |                           |      |
| 2   | Study Designs, Observational Studies, Cross-Sectional Studies  | Reading related resource       |                         |                           |      |
| 3   | Experimental Studies, Errors and Bias in Scientific Research   | Reading related resource       |                         |                           |      |
| 4   | Checklists for Research  | Reading related resource       |                         |                           |      |
| 5   | Preparation of Research Protocols  | Reading related resource       |                         |                           |      |
| 6   | International and National Research Project Support Programs with the Technology Transfer Office (TTO)   | Reading related resource       |                         |                           |      |
| 7   | Research Project Support Program for Undergraduate Students with the TTO   | Reading related resource       |                         |                           |      |
| 8   | Proposals of Successful Medical Projects with the TTO  | Reading related resource       |                         |                           |      |
| 9   | Literature Review for patenting and Using Reference Tools with the TTO   | Reading related resource       |                         |                           |      |
| 10  | Group Work: Discussing Project Proposals with the TTO  | Reading related resource       |                         |                           |      |
| 11  | The Role of Biostatistics in Medical Research  | Reading related resource       |                         |                           |      |
| 12  | Group Work: Statistical and methodological assessment of Proposals   | Reading related resource       |                         |                           |      |
| 13  | Group Discussions with the TTO   | Reading related resource       |                         |                           |      |
| 14  | Working with advisors / Conducting Research  | Reading related resource       |                         |                           |      |
| <b>Evaluation Methods</b>   |  | <b>Weight(%)</b>               |                         |                           |      |
| Midterm Exam  |  | 0                              |                         |                           |      |
| General Exam  |  | 100                            |                         |                           |      |

| Resources |  |
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| 1.        | Medical Research Essentials 1st Edition, Estetie R., Mc Graw Hill Education, 2014. |
| 2.        | Paul Trott - Innovation Management and New Product Development, Prentice Hall      |
| 3.        | Tom Burns, G.M. Stalker - The Management of Innovation, Tavistock Publications     |