

| Course Description | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Code | YS 438 |
| Course Name | RESEARCH TECHNIQUES |
| Prerequisite Courses | |
| Language of the Course | The English |
| Course Coordinator | |
| Instructor(s) | |
| Course Assistants | |
| The aim of the course | Objectives of this course are to show the ways of scientific studies and enable them to be sophisticated academicians and/or scientists. |
| Course Content | Philosophy of science, education and public, hypothesis development in research, description of the issue and objectives, critical evaluation of literature. |

| Weekly Course Content | |
|-----------------------|------------------------------------------------------|
| Week 1 | Philosophy of science |
| Week 2 | Scientific research planning |
| Week 3 | Project preparation in scientific research |
| Week 4 | Scientific article preparation |
| Week 5 | Seminar, poster preparation and presentation |
| Week 6 | Ethics in scientific studies |
| Week 7 | Ethics in scientific studies |
| Week 8 | Midterm exam |
| Week 9 | Publishing and presentation process of written texts |
| Week 10 | Research methods |
| Week 11 | Research methods |
| Week12 | IMRAD Structure |
| Week 13 | Fatal mistakes of article writers |
| Week 14 | Fatal mistakes of article writers |
| Week 15 | Final exam |

| Course Learning Outcomes | |
|--------------------------|-----------------------------------------------------|
| 1 | Literature search |
| 2 | Attention to ethical rules in the publication phase |
| 3 | How to get broadcast information |
| 4 | - |
| 5 | - |
| 6 | - |

| Contribution of the Course to Program Qualifications | | Contribution Level |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 01 | The student will have the ability to apply analytical approach, mathematics and science knowledge in software and engineering issues. | 5 |
| 02 | The student will have the ability to identify, define, formulate and solve a problem in software and computer systems. | 0 |
| 03 | The student will have gains scientific research skills in software and engineering problems, has the ability to design a system, part or process. | 4 |
| 04 | The student will have the ability to use the design capability, techniques and tools required for engineering applications. | 5 |
| 05 | The student will have the ability to design, implement and interpret experimental work and software projects by analyzing the results. | 4 |
| 06 | The student will have the ability to work between disciplines and teamwork. | 0 |
| 07 | The student will have the ability to work in international environments and adapt to different cultures. | 3 |
| 08 | The student will have verbal and written communication skills in Turkish and English. | 0 |
| 09 | The student will have the awareness of the necessity of lifelong learning and the ability to realize it. | 0 |
| 10 | The student will gain knowledge of legal issues with the awareness of professional and ethical responsibility. | 0 |
| 11 | The student will have managerial skills (leadership, organization, time and risk management, quality awareness, efficiency, etc.). | 5 |
| 12 | The student will have the ability to participate in social activities, to acquire regular sports habits and to use time in the best way. | 0 |
| 13 | The student will have the ability to find unusual ways and produce projects. | 0 |
| 14 | The student will have professional self-confidence, being an entrepreneur and taking initiative. | 0 |
| 15 | It is sensitive about the problems of the age and looks after the national interests. | 5 |

| ECTS WORKLOAD | | | |
|----------------------------------------------------|--------|------------------|-----------------|
| | Number | Duration (hours) | Number*Duration |
| Face to face education | 14 | 2 | 28 |
| Out-of-class study time (pre-study, reinforcement) | 5 | 1 | 5 |
| Homeworks | 0 | 0 | 0 |
| Presentation / Seminar preparation | 0 | 0 | 0 |
| Quizzes | 0 | 0 | 0 |
| Preparation for midterm exams | 1 | 5 | 5 |
| midterm exams | 1 | 2 | 2 |
| Project (Semester assignment) | 0 | 0 | 0 |
| Lab | 0 | 0 | 0 |
| field work | 0 | 0 | 0 |
| Preparation for the final exam | 1 | 10 | 10 |
| Semester final exam | 1 | 2 | 2 |
| Research | 14 | 2 | 28 |
| TOTAL WORKLOAD | | | 80 |
| ECTS | | | 3 |

| Evaluation | | |
|------------------------------------------------------|--------|-------------------------|
| SEMESTER EVALUATION | Number | Contribution Percentage |
| Midterm | 1 | 100 |
| Quiz | 0 | 0 |
| Homework | 0 | 0 |
| SEMESTER TOTAL | | 100 |
| Contribution rate of mid-term evaluations to success | | 40 |
| Contribution rate of the final exam to success | | 60 |
| GRAND TOTAL | | 100 |

| | |
|-------------------|--|
| RESOURCES | |
| Textbook | |
| Helpful Resources | |