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|----------------------------------|--------------------|----------------------|------------------|
| Biomedical Engineering (English) |                    |                      |                  |
| Bachelor                         | TR-NQF-HE: Level 6 | QF-EHEA: First Cycle | EQF-LLL: Level 6 |

## Course Introduction and Application Information

|   |   |  |  |
|---|---|--|--|
| Course Code:                              | UNI083  |  |  |
| Course Name:                              | Research Methods in English Literature  |  |  |
| Semester:                                 | Fall  |  |  |
| Course Credits:                           | <div>ECTS</div> <div>5</div>  |  |  |
| Language of instruction:                  | English   |  |  |
| Course Condition:                         |   |  |  |
| Does the Course Require Work Experience?: | No  |  |  |
| Type of course:                           | University Elective   |  |  |
| Course Level:                             | <div> <div>Bachelor</div> <div>TR-NQF-HE:6.<br/>Master`s Degree</div> <div>QF-EHEA:First<br/>Cycle</div> <div>EQF-LLL:6.<br/>Master`s Degree</div> </div> |  |  |
| Mode of Delivery:                         | Face to face  |  |  |
| Course Coordinator:                       | Araş. Gör. BURAK ASLAN  |  |  |
| Course Lecturer(s):                       |   |  |  |
| Course Assistants:                        |   |  |  |

## Course Objective and Content

|                    |   |
|--------------------|---|
| Course Objectives: | This course aims to familiarize students with the definition of research, research methods, research question, hypothesis building, data collection and data analysis, data evaluation, interpretation and reporting, sample theses, source scanning methods, sample research |
| Course Content:    | Definition of research, research methods, research question, hypothesis building, data collection and data analysis, data evaluation, interpretation and reporting, sample theses, source scanning  |

## Learning Outcomes

The students who have succeeded in this course;

- 1) To be able to recognize the main research tools, techniques and approaches
- 2) To be able to choose the best tools, techniques and approaches for conducting effective research and obtaining productive results.
- 3) To be able to organize research according to stages, stages and steps in order to conduct research more efficiently
- 4) Will be familiar with the basic elements of academic research reports and be able to create clear, well-organized and in-depth analytical reports of their research

## Course Flow Plan

| Week | Subject   | Related Preparation |
|------|---|---------------------|
| 1)   | INTRODUCTION  |                     |
| 2)   | How do we know what we know?  |                     |
| 3)   | Qualitative Methods   |                     |
| 4)   | Objectivity and Realism   |                     |
| 5)   | Digital Methods   |                     |
| 6)   | Annotated Bibliography: What and How                                  |                     |
| 7)   | MIDTERM ASSIGNMENT (Research question and annotated bibliography due) |                     |
| 8)   | How to do Interviews  |                     |
| 9)   | Ethnography   |                     |
| 10)  | Literature Reviews: How to and Why                                    |                     |
| 11)  | Quantitative Methods  |                     |
| 12)  | Surveys: How To   |                     |
| 13)  | Descriptive Statistics and Graphs                                     |                     |
| 14)  | Ethics + Other Methods  |                     |

## Sources

|                           |   |
|---------------------------|---|
| Course Notes / Textbooks: | <ul style="list-style-type: none"> <li>• Nachmias, David. Research Methods in the Social Sciences. Worth Publishers, Inc; 6th Edition 2000 edition (2000).</li> </ul> |
|---------------------------|---|

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|-------------|--|
| References: |  |
|-------------|--|

### Course - Program Learning Outcome Relationship

| Course Learning Outcomes  | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Program Outcomes  |   |   |   |   |
| 1) Adequate knowledge of mathematics, science and biomedical engineering disciplines; Ability to use theoretical and applied knowledge in these fields in solving complex engineering problems.   |   |   |   |   |
| 2) Ability to identify, formulate and solve complex biomedical engineering problems; ability to select and apply appropriate analysis and modeling methods for this purpose.  |   |   |   |   |
| 3) Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; ability to apply modern design methods for this purpose.  |   |   |   |   |
| 4) Ability to select and use modern techniques and tools necessary for the analysis and solution of complex problems encountered in biomedical engineering practices; Ability to use information technologies effectively.  |   |   |   |   |
| 5) Ability to design, conduct experiments, collect data, analyze and interpret results for the investigation of complex biomedical engineering problems or discipline-specific research topics.   |   |   |   |   |
| 6) Ability to work effectively in disciplinary and multi-disciplinary teams; individual working skills.   |   |   |   |   |
| 7) Ability to communicate effectively orally and in writing; knowledge of at least one foreign language, ability to write effective reports and understand written reports, to prepare design and production reports, to make effective presentations, to give and receive clear and understandable instructions. |   |   |   |   |
| 8) Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.   |   |   |   |   |
| 9) Knowledge of ethical principles, professional and ethical responsibility, and standards used in engineering practices.   |   |   |   |   |
| 10) Knowledge of business practices such as project management, risk management and change management; awareness of entrepreneurship, innovation; information about sustainable development.  |   |   |   |   |
| 11) Information about the effects of biomedical engineering practices on health, environment and safety in universal and social dimensions and the problems of the age  |   |   |   |   |

|   |   |   |   |   |
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| reflected in the field of engineering; Awareness of the legal consequences of biomedical engineering solutions. | 1 | 2 | 3 | 4 |
| <b>Course Learning Outcomes</b>   |   |   |   |   |

### Course - Learning Outcome Relationship

| No Effect | 1 Lowest | 2 Average | 3 Highest |
|-----------|----------|-----------|-----------|
|           |          |           |           |

|     | Program Outcomes   | Level of Contribution |
|-----|--|-----------------------|
| 1)  | Adequate knowledge of mathematics, science and biomedical engineering disciplines; Ability to use theoretical and applied knowledge in these fields in solving complex engineering problems.   |                       |
| 2)  | Ability to identify, formulate and solve complex biomedical engineering problems; ability to select and apply appropriate analysis and modeling methods for this purpose.  |                       |
| 3)  | Ability to design a complex system, process, device or product to meet specific requirements under realistic constraints and conditions; ability to apply modern design methods for this purpose.  |                       |
| 4)  | Ability to select and use modern techniques and tools necessary for the analysis and solution of complex problems encountered in biomedical engineering practices; Ability to use information technologies effectively.  |                       |
| 5)  | Ability to design, conduct experiments, collect data, analyze and interpret results for the investigation of complex biomedical engineering problems or discipline-specific research topics.   |                       |
| 6)  | Ability to work effectively in disciplinary and multi-disciplinary teams; individual working skills.   |                       |
| 7)  | Ability to communicate effectively orally and in writing; knowledge of at least one foreign language, ability to write effective reports and understand written reports, to prepare design and production reports, to make effective presentations, to give and receive clear and understandable instructions. |                       |
| 8)  | Awareness of the necessity of lifelong learning; the ability to access information, follow developments in science and technology, and constantly renew oneself.   |                       |
| 9)  | Knowledge of ethical principles, professional and ethical responsibility, and standards used in engineering practices.   |                       |
| 10) | Knowledge of business practices such as project management, risk management and change management; awareness of entrepreneurship, innovation; information about  |                       |

|     |  |  |
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|     | sustainable development.   |  |
| 11) | Information about the effects of biomedical engineering practices on health, environment and safety in universal and social dimensions and the problems of the age reflected in the field of engineering; Awareness of the legal consequences of biomedical engineering solutions. |  |

### Assessment & Grading

| Semester Requirements       | Number of Activities | Level of Contribution |
|-----------------------------|----------------------|-----------------------|
| Midterms                    | 1                    | % 50                  |
| Final                       | 1                    | % 50                  |
| <b>total</b>                |                      | <b>% 100</b>          |
| PERCENTAGE OF SEMESTER WORK |                      | % 50                  |
| PERCENTAGE OF FINAL WORK    |                      | % 50                  |
| <b>total</b>                |                      | <b>% 100</b>          |

### Workload and ECTS Credit Calculation

| Activities               | Number of Activities | Preparation for the Activity | Spent for the Activity Itself | Completing the Activity Requirements | Workload   |
|--------------------------|----------------------|------------------------------|-------------------------------|--------------------------------------|------------|
| Course Hours             | 14                   | 0                            | 3                             |                                      | 42         |
| Study Hours Out of Class | 16                   | 0                            | 5                             |                                      | 80         |
| Midterms                 | 1                    | 0                            | 2                             |                                      | 2          |
| Final                    | 1                    | 0                            | 2                             |                                      | 2          |
| <b>Total Workload</b>    |                      |                              |                               |                                      | <b>126</b> |