**ESOGU Primary Education Department** (Primary School Teaching) **COURSE INFORMATION FORM**

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| **SEMESTER** | Fall1 |

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| **COURSE CODE** | 171413120 | **COURSE NAME** | Laboratory Applications of Science |

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| **SEMESTER** | **WEEKLY COURSE PERIOD** | | | | | |  | | | | | |
| **Theory** | | **Practice** | **Labratory** | | | **Credit** | **ECTS** | **TYPE OF COURSE** | | | **LANGUAGE OF COURSE** |
| 3 |  | | 0 | 2 | | | 1 | 3 | COMPULSORY (X) ELECTIVE ( ) | | | Turkish |
| **COURSE CATAGORY** | | | | | | | | | | | | |
| **Professional Knowledge** | | **Content Knowledge** | | | **General Knowledge** | | | | | | **Elective Course** | |
|  | | X | | |  | | | | | | Professional Know.( ) Content Know.() Gen. Know ( ) | |
| **ASSESSMENT CRITERIA** | | | | | | | | | | | | |
| **MID-TERM** | | | | | | **Evaluation Type** | | | | **Quantity** | | **%** |
| Mid-Term | | | | 1 | | 40 |
| Quiz | | | |  | |  |
| Homework | | | | 1 | | 15 |
| Project | | | |  | |  |
| Report | | | |  | |  |
| Others (………) | | | |  | |  |
| **FINAL EXAM** | | | | | |  | | | | 1 | | 45 |
| **PREREQUIEITE(S)** | | | | | | This course has no preliminary condition. | | | | | | |
| **COURSE DESCRIPTION** | | | | | | The aim and the aim of the laboratory in science teaching; safety in the laboratory; scientific method, scientific process skills and how they are gained; laboratory experiments for primary school (planning, conducting and evaluating the results of the experiments), preparation of experimental worksheets and experiment reports; examples of experiments that can be done with simple and inexpensive materials; group work. | | | | | | |
| **COURSE OBJECTIVES** | | | | | | Planning, conducting, evaluating the results of the experiments in the primary school programs and educating teachers with the confidence to carry them out as needed. | | | | | | |
| **ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION** | | | | | | In the future career; in the science class in the third and fourth grade primary school; Having the sense of confidence to carry out scientific experiments as required, equipped with the knowledge and skills to carry out learning - teaching activities. | | | | | | |
| **COURSE OUTCOMES** | | | | | | 1. Candidate teachers select and design experiments appropriate to the subject.  2. Candidate teachers make scientific reports by analyzing and interpreting the data.  3. Candidate teachers have knowledge about laboratory safety.  4. Candidate teachers take responsibility for individual and group work related to their field and actively carry out the task. | | | | | | |
| **TEXTBOOK** | | | | | | Çepni, S., Ayvacı, Ş. H.; Bacanak, A.; Özsevgeç, T., Aydın, M. (2008). Fen ve Teknoloji Laboratuvar Uygulamaları I. Trabzon: Celepler Matbaacılık.Çepni, S., Ayvacı, Ş. H.; Bacanak, A.; Özsevgeç, T., Aydın, M. (2009). Fen ve Teknoloji Laboratuvar Uygulamaları II. Trabzon: Celepler Matbaacılık. | | | | | | |
| OTHER REFERENCES | | | | | | Şimşek, N. ve Çınar, Y. (2016). Fen ve Teknoloji Laboratuvarı ve Uygulamaları. Ankara: Nobel | | | | | | |
| **TOOLS AND EQUIPMENTS REQUIRED** | | | | | | Gadgets of laboratory. | | | | | | |

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| **COURSE SYLLABUS** | |
| **WEEK** | **TOPICS** |
| 1 | Laboratory Approach Based on Constructivist and Scientific Process Skills |
| 2 | Safety in Science and Technology Laboratory |
| 3 | Getting to know the material |
| 4 | Motion and Force |
| 5 | Light and Sound |
| 6 | Let's Learn the World of Life |
| 7-8 | MID-TERM EXAM |
| 9 | Electricity Directing Our Life |
| 10 | Let's make a Limondan Battery, Make Pes and Treble Sound |
| 11 | Measuring and Using Numbers: Electromagnetics, Angle Mirrors |
| 12 | Space Time - Space Location Relation: Rising Coin, Candle Error |
| 13 | Changing and Checking Variables: Pendulum Clocks, Egg Layout |
| 14 | Description by Making: Diapason and Sound Formation, Let's Make Hacı Yatmaz |
| 15-16 | FINAL EXAM |

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| **NO** | **PRIMARY SCHOOL TEACHING PROGRAM OUTCOME** | **3** | **2** | **1** |
| 1 | Has the ability of using Turkish according to rules, properly and effectively and communicate with students in a healthy way |  | **x** |  |
| 2 | Is a teacher who depend on Atatürk’s principles and revolutions, believes in democracy, is aware of Turkish national, spiritual, moral and cultural values and show susceptibility to this in his/her profession |  | **x** |  |
| 3 | Has pedagogical knowledge in the teaching profession and its field, know and apply modern teaching methods and techniques, assessment and evaluation methods | **x** |  |  |
| 4 | Is sensitive to society, environment, human, artistic and cultural activities and sport; educate students who are beneficial to society, face the future with confidence and explore, question and support life-long learning | **x** |  |  |
| 5 | Takes responsibility in individual and group work related to field and perform the task effectively | **x** |  |  |
| 6 | Has individual and professional development by pursuing life-long learning consciousness, learn how to learn |  | **x** |  |
| 7 | Makes self-assessment | **x** |  |  |
| 8 | Reaches field knowledge in social and professional life by learning a foreign language at a basic level |  |  | **x** |
| 9 | Has the knowledge of teacher profession in primary school education field, concept, theory and practice related to general culture and basic science |  | **x** |  |
| 10 | Has the ability of using science and communication technology technically and pedagogically |  | **x** |  |
| 11 | Does appropriate planning and implementation by taking consideration the development characteristics, individual differences of students, the characteristic of subject area and gains | **x** |  |  |
| 12 | Has enough knowledge of the structure of national and international education system and primary school teaching and historical development |  |  | **x** |
| 13 | Respects national culture and universal values |  |  | **x** |
| **1**:None. **2**:Partially contribution. **3**: Completely contribution. | | | | |

**Instructor(s):** Assoc. Prof. Dr. Hüseyin Anılan  **Signature: Date:**