Kırıkkale University

FACULTY OF EDUCATION
ELEMENTARY SCHOOL TEACHER EDUCATION

SNÖ3001	Science Teaching				
Semester	**Course Unit Code**	**Course Unit Title**	**L+P**	**Credit**	**Number of ECTS Credits**
5	SNÖ3001	Science Teaching	3	3	4

Mode of Delivery:
Face to Face
Language of Instruction:
Turkish
Level of Course Unit:
Bachelor's Degree
Work Placement(s):
No
Department / Program:
ELEMENTARY SCHOOL TEACHER EDUCATION
Type of Course Unit:
Required
Objectives of the Course:
This course aims to provide basic knowledge and skills about teaching science subjects to undergraduate students.
Teaching Methods and Techniques:
The main topics covered in this course are: basic concepts of science and science education, features of science, technology, scientific knowledge and scientific method, science and technology literacy, history of science and science, research based science education, sample research based applications.
Prerequisites and co-requisities:

Course Coordinator:

Name of Lecturers:
Dr. Öğr. Üyesi KADER BİLİCAN
Assistants:

Recommended or Required Reading

Resources

Çepni, S. 2009. (Ed). Kuramdan Uygulamaya Fen ve Teknoloji Öğretimi, Pegema Yayıncılık, 7. Baskı, Ankara

Temizyürek, K. Fen Öğretimi ve Uygulamaları, Nobel Yayıncılık.

Aydoğdu, M. ve Kesercioğlu T. İlköğretimde Fen ve Teknoloji Öğretimi, Anı Yayıncılık.

Course Category

Mathmatics and Basic Sciences	:		Education	:
Engineering	:		Science	:
Engineering Design	:		Health	:
Social Sciences	:		Field	:

Weekly Detailed Course Contents

Week	Topics	Study Materials	Materials
1	Scientific literacy	Doing required readings	Bahar, M. (2006) Fen Teknoloji Ö¿
2	Nature of science,	Doing required readings	Bahar, M. (2006) Fen Teknoloji Ö¿
3	Science Process Skilss	Doing required readings	Bahar, M. (2006) Fen Teknoloji Ö¿
4	Constructivism in Science Teaching	Doing required readings	Bahar, M. (2006) Fen Teknoloji Ö¿
5	Conceptual Teaching	Searching for scientific misconceptions	Bahar, M. (2006) Fen Teknoloji Ö¿
6	Inquiry Based Teaching	Doing required readings	Bahar, M. (2006) Fen Teknoloji Ö¿
7	Learning Cycles (3E, 5E, 7E(	Textbook analysis	Bahar, M. (2006) Fen Teknoloji Ö¿
8	Midterm		
9	STEM yaklaşımı	Doing required readings	Bahar, M. (2006) Fen Teknoloji Ö¿
10	STEM application examples	Providing materials for the required acti	Bahar, M. (2006) Fen Teknoloji Ö¿
11	microteaching	Not applicable	Bahar, M. (2006) Fen Teknoloji Ö¿
12	Mikroteaching	Not applicable	Bahar, M. (2006) Fen Teknoloji Ö¿
13	Mikro teaching	Not applicable	Bahar, M. (2006) Fen Teknoloji Ö¿
14	Microteaching	Not applicable	Bahar, M. (2006) Fen Teknoloji Ö¿
15	General evealuation of the class/Finals	Not applicable	Bahar, M. (2006) Fen Teknoloji Ö¿

Course Learning Outcomes

No	Learning Outcomes
C01	At the end of this course, the student defines and distinguishes the terms of science, science and technology,
C02	Explains the concept of scientific literacy and the characteristics of scientific literate person
C03	Comprehend the aims of the science curriculum
C04	Designing and applying student-centered science activities
C05	The themes that make up the nature of science are the sequences and explanations
C06	Designing and applying inquiry based science activities
C07	Desinging and applying STEM activities

Program Learning Outcomes

No	Learning Outcome
P08	Use information and communication technologies effectively in the education process.
P03	Use theoretical and practical knowledge to develop basic language skills effectively.
P07	Having competencies in the field of Life Science and Social Studies, to help students to be aware of democratic citizenship, universal and cultural values.
P19	Follows the development and learning characteristics of the students closely and organizes appropriate learning environments for these features.
P04	Act responsibly to scientific and professional ethics. Be sensitive to scientific and professional ethical values.
P13	Designs and implements learning environments in which student is an active learner and teacher is the guide within primary education curriculum.
P15	Have an active role of arranging artistic, cultural and social projects-activities for that living social community.
P10	Designs learning environments using mathematics teaching competencies for developing mathematical concepts and relationships.
P05	Has scientific inquiry skills, problem solving, making informed decisions, critical and creative thinking skills.
P09	With mathematics education, students gain knowledge and skills to help them understand the physical world.
P11	Have knowledge of basic science concepts. Designs inquiry based learning environments related to scientific concepts.
P12	Take responsibility for daily life problems and uses scientific knowledge, science process skills and scientific method to design solutions to problems.
P06	Follows activities, innovations and publications that contribute to professional development.
P20	Provides appropriate settings to develop an aesthetic view in art, games and sports ranging from national level to the universal.
P01	Adopts Atatürk's Principles and Revolutions and fulfills its duties and responsibilities in accordance with democratic, national, spiritual, moral and cultural values.
P16	Follows developments in the agenda of the society and the world, interpret, evaluate and associate them within the field.
P17	Apply individualized teaching program by considering individual differences in learning.
P18	By believing the importance of school, society and environment; fulfills individual, social and universal responsibilities
P02	Use Turkish accurately and effectively and be a model for students and community.
P14	Uses measurement and evaluation strategies that enhance meaningful and lasting learning in which students are monitored and guided in the process.

Assessment Methods and Criteria

In-Term Studies	Quantity	Percentage
Mid-terms	1	%40
Quizzes	0	%0
Assignment	0	%0
Attendance	0	%0
Practice	0	%0
Project	0	%0
Final examination	1	%60
Total		**%100**

ECTS Allocated Based on Student Workload

Activities	Quantity	Duration	Total Work Load
Course Duration	16	3	48
Hours for off-the-c.r.stud	16	2	32
Assignments	5	4	20
Presentation	5	4	20
Mid-terms	1	10	10
Practice	0	0	0
Laboratory	0	0	0
Project	0	0	0
Final examination	1	20	20
Total Work Load			**150**
ECTS Credit of the Course			**5**

Contribution of Learning Outcomes to Programme Outcomes

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	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20
All	1	2	2	3	5	2	1	2	1	1	5	5	4	3	1	4	2	2	3	1
C01	1	2	2	3	4	2	2	1	1	1	5	5	2	3	1	3	2	2	3	1
C02	1	2	2	3	5	2	1	1	1	1	5	5	2	2	1	3	2	2	3	1
C03	1	2	2	2	5	2	1	1	1	1	5	5	4	3	1	3	2	2	3	1
C04	1	2	2	2	5	1	1	1	1	1	5	5	4	3	1	3	2	2	3	1
C05	1	2	2	2	5	1	1	1	1	1	4	5	3	3	1	3	2	3	3	1
C06	1	2	2	2	5	1	1	3	1	1	5	5	5	5	1	4	4	2	4	1
C07	1	2	2	2	5	1	1	3	1	1	5	5	5	5	1	4	4	2	4	1