Elementary Science Education (Master Program)

1. Guideline

Master's degree in elementary science education began to admission the students, first at the Institute of Science in 2004/2005 academic year.

Elementary science education graduate program at the Institute of Social Sciences students took first, with the establishment of the Institute of Educational Sciences, 2009/2010 from the academic year, the program has been incorporated into the Institute of Educational Sciences. Within the program, as well as compulsory subjects related to the field of basic education science elective course for the training are also included.

The main objective of the program is to train specialists, equipped with effective information related to elementary science education, follow science education literature and carry out independent research in elementary science education.

2. Degree Awarded

Students who successfully complete the program are awarded a postgraduate diploma in science teacher.

3. Grade Level

Postgraduate diploma

4. Admission Requirements

To start the program is valid general admission requirements applying for Turkish and foreign students.

5. Recognition of Prior Learning

Turkish Higher Education institutions, recognition of prior non-formal learning, vertical, horizontal and the university is determined by the Board of Higher Education in the transitions "Institutions Of Higher Education Programs Undergraduate Students And Switching, Double Major, Minor And Credit Transfer Between Corporate Action On Basis Of Regulation" carried out within the scope of.

Exams of exemption are organized certificate-based or experience-based learning outside of formal educational institutions in recognition for some of the computer and foreign language courses at the beginning of each academic semester in Turkey. Students who take the exam and pass the courses in the curriculum are exempt from the relevant.

6. Qualification Requirements and Regulations.

All courses must be passed in the student's program, FF, should not grade DZ or NZ. In this program, students provide a minimum 32 course credits and GPA must be at least 3.00 out of 4.00.

7. Purposes of the programme

- ✓ Who can issues in the field of sufficient knowledge, skills and competence,
- ✓ Who can improve advanced problem-solving skills,
- ✓ Who can works in teams,
- ✓ Who can express themselves orally and in writing,
- ✓ Who know how to obtain information, knowledge producing and using information,
- ✓ Who can improve creativity and innovation capability,
- ✓ Who can design in accordance with the objectives of education and training environments,
- ✓ Who can improve professional and ethical responsibility,
- ✓ Who can respect for the values of the society and produce solutions

8. Program Competencies (Learning Outcomes)

1. Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,
2. Captures logical links for the spirit of researchers, scientific, cause-effect relations,
3. Ability to relate knowledge across disciplines,
4. Has information about impact of technological developments on science teaching,
5. Has information about multi-versatile assessment and evaluation in science and technology course,
6. Has information about science and technology course curriculum,
7. To gain to comparison skills of science teaching in Turkey and in the world,
8. To suggest to solutions encountered difficulties in science education,
9. Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,
10. Describe a problem encountered in his/her educational field and design and conduct this research question.

9. Graduates Employment Opportunities

Students graduating from the Master's program in elementary science education, public and private educational institutions under the Ministry of National Education, and on the private and state universities departments work as a research assistant or teaching assistant.

10. Jump to Top Degree Programs

Succesful completion of undergraduate degree candidates to take the ALES score or equivalent examinations and apply on condition that they have sufficient knowledge of foreign language education in their field or a related field may PhD programs.

11. Exams, Measurement and Evaluation

Evaluation and assessment methods for each course "Course Information Form" is defined in detail in.

12. Graduation Requirements

Graduation requirements "Qualification Requirements and Regulations" as described in the section.

13. Mode of Study (Full-time, e -learning)

Full- time, e-learning.

14. Address and Contact İnformation (Department/Program Chair, Assistants and Erasmus Coordinator)

Eskişehir Osmangazi University
Institute of Education Sciences
Post Graduate in Elementary Science Education
Faculty of Education , Meşelik Campus, Odunpazarı-Eskişehir.

Assoc. Prof. Dr. Özden TEZEL (Head of Department)
Tel: +90 222 239 3750-1652

Program Erasmus Coordinator: Assoc. Prof. Dr. Cansu FİLİK İŞCEN (1619-internal)
E-mail: ilkogretim@ogu.edu.tr

15. Department/ Program Opportunities

Elementary science education graduate program three associate professor, four assistant professor, two research assistant and one teacher faculty members are on duty. Courses in the postgraduate program could take in 2 classrooms, a computer lab and 1 classroom video conference. Postgraduate courses carried classrooms have equipment such as projectors and the internet.

16. People (Academic Staff)

Assoc. Prof. Dr. Özden TEZEL (Head of Department)
Assoc. Prof. Dr. Cansu FİLİK İŞCEN
Assoc. Prof. Dr. S. Deniz KORKMAZ
Asist. Prof. Dr. Cavide DEMİRCİ
Asist. Prof. Dr. Asiye BERBER
Asist. Prof. Dr. M. Zafer BALBAĞ
Asist. Prof. Dr. Burcu ANILAN
Res. Asis. Ersin KARADEMİR
Res. Asis. Munise SEÇKİN
Teacher Nurhan ATALAY

17. Courses- ECTS Credits

To see the detail information of any aims, learning outcomes, content, assessment and workload as ECTS course in the following click on the name.

Elementary Science Education Master Program Courses					
Autumn Semester					
Code	**Course Name**	**ECTS**	**T+A+C**	**C/E**	**Lenguage**
541501001	Research Methods in Education I	10	3–0–3	C	Turkish
541501002	Education Statistics I	10	3–0–3	C	Turkish
541501901	Special Topics	5	3–0–0	C	Turkish
541501003	Curriculum Development in Primary Education	10	3–0–3	E	Turkish
541501004	Education Policies in Turkey	10	3–0–3	E	Turkish
541501005	Environmental Pollution in Turkey	10	3–0–3	E	Turkish
541501006	Theories of Science Teaching	10	3–0–3	E	Turkish
541501007	Human, Nature and Science	10	3–0–3	E	Turkish
541501008	Issues in Science Education	10	3–0–3	E	Turkish
541501009	Alternative Learn-Teach.Processes at Science Educ.	10	3–0–3	E	Turkish
Total Credit		**30**	**15**		
Fall Semester					
Code	**Course Name**	**ECTS**	**T+A+C**	**C/E**	**Lenguage**
541502003	Seminar	10	0–3–0	C	Turkish
541502701	Master Thesis	25	0–1–0	C	Turkish
541502001	Research Methods in Education II	10	3–0–3	E	Turkish
541502002	Education Statistics II	10	3–0–3	E	Turkish
541502004	New Approaches to Science Education	10	3–0–3	E	Turkish
541502005	Turkey's Water Resources	10	3–0–3	E	Turkish
541502006	Astronomy Education in Turkey	10	3–0–3	E	Turkish
541502007	Human and Health	10	3–0–3	E	Turkish
541502008	Measurement and Evaluation in Primary Education	10	3–0–3	E	Turkish
541502009	The Nature of Science and Instruction	10	3–0–3	E	Turkish
Total Credit		**30**	**12**		

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	2011-2012 Fall

COURSE CODE	541501001	COURSE NAME	Research Methods in Education I

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
SPRING	3	0	0	3	10	COMPULSORY (X) ELECTIVE ( )	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Primary School Teaching [if it contains considerable design, mark with (√)]	Social Science
-	%100		

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	30
	Quiz		
	Homework	1	20
	Project		
	Report		
	Others (presentation, summary of the presented discussion)		
FINAL EXAM		1	50

PREREQUIEITE(S)	-
COURSE DESCRIPTION	Main purpose of this course is to enable students to examine research processes (determining a problem, data collection, data analysis, and interpretation of the results), to review some certain scientific research methods (experimental, survey, correlational research methods, et al.) and to learn practical techniques for how to make literature review necessary for a certain research topic, data gathering, data evaluation and reporting.
COURSE OBJECTIVES	The objective of this course is to gain ability for performing all aspects of quantitative research.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	1. to develop understandings about the role of research in science –especially in knowledge management 2. to gain knowledge about research processes and research methods 3. to analyze research in knowledge management field and gaining evaluation ability 4. to think systematically for solving problems in knowledge management field and perform analytical methods 5. to teach data collection, data analysis and evaluation techniques 6. to gain knowledge in writing research proposal and preparing research report
TEXTBOOK	• McMillan, J. H., & Schumacher, S. (2006). Research in education: Evidence based inquiry. Boston, MA: Brown and Company.
OTHER REFERENCES	• *Cohen, L., Manion, L., & Morrison, K. (2007). Research methods in education. New York: Routledge.* • *Muijs, D. (2004). Doing quantitative research in education: With SPSS. London: Sage.* • *APA (2009). Amerikan Psikoloji Derneği yayım kılavuzu. İstanbul: Kaknüs Yayınları.* • *Neuman, W. Lawrence (2008). Toplumsal araştırma yöntemleri. İstanbul: Yayınodası Yayıncılık.* • *Punch, Keith F. (2005). Sosyal araştırmalara giriş: Nitel ve nicel yaklaşımlar. İstanbul: Siyasal Kitapevi.* • *Sipahi, B., Yurtkoru, E. S., & Çinko, M. (2010). Sosyal bilimlerde*

	SPSS'le veri analizi. İstanbul: Beta Yayınları. • *Türkiye Bilimler Akademisi (2002). Bilimsel araştırmada etik ve sorunları. Ankara: TUBA*
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Basic principles in educational research
2	Problem/Purpose
3	Literature Review
4	Qualitative and quantitative research designs
5	Sampling
6	Experimental research
7-8	MID-TERM EXAM
9	Survey research – Correlational research
10	Causal research
11	Qualitative and quantitative measurement
12	Quantitative data analysis
13	Writing research report
14	Course evaluation
15-16	FINAL EXAM

NO	**PROGRAM OUTCOMES**	**3**	**2**	**1**
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,			**x**
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	**x**		
3	Ability to relate knowledge across disciplines,		**x**	
4	Has information about impact of technological developments on science teaching,	**x**		
5	Has information about multi-versatile assessment and evaluation in science and technology course,		**x**	
6	Has information about science and technology course curriculum,		**x**	
7	To gain to comparison skills of science teaching in Turkey and in the world,		**x**	
8	To suggest to solutions encountered difficulties in science education,	**x**		
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	**x**		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	**x**		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Assoc. Prof. Dr. Engin Karadağ
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Fall

COURSE CODE	541501002	COURSE NAME	Education Statistics I

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
FALL	3	0	0	3	10	COMPULSORY (X) ELECTIVE ( )	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Mechanical Engineering Profession [if it contains considerable design, mark with (√)]	Social Science
X			

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	1st Mid-Term		
	2nd Mid-Term		
	Quiz		
	Homework	1	40
	Project		
	Report		
	Others (……)		
FINAL EXAM		1	60

PREREQUIEITE(S)	None
COURSE DESCRIPTION	Basic terms of statistics, universe, sample, types of variables, categorizing the variables, descriptive statistics, transforming the raw scores to standardized scores. Normality, z-distribution, statistical error, hypothesis tests and decision, one-sample t-test, ki-square test. Significancy test of mean differences (independent samples t-test, dependent samples t-test, one way analysis of variance (ANOVA), non-parametric tests), correlation and regression analysis.
COURSE OBJECTIVES	Knowledge of basic terms of statistics, categorizing the variables, calculating the descriptive statistics, transforming the raw scores to standardized scores. Comprehension the statistical error. Administration hypothesis tests and deciding through results.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	Knows the basic terms of statistics. Calculates the basic descriptive statistics, transforms the raw scores to standardized scores, administers the one-sample t-test and ki-square test and decides through results.
TEXTBOOK	Şener Büyüköztürk, Sosyal Bilimler İçin Veri Analizi El Kitabı, Pegem Akademi Yayıncılık.
OTHER REFERENCES	
TOOLS AND EQUIPMENTS REQUIRED	Computer.

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Introducing
2	Basic terms, universe and sample, variable types, categorizing the data.
3	Normal and Z distribution, statistical error and decision.
4	Introducing to statistical software, creating a database.
5	Descriptive statistics.
6	Hypothesis types and hypothesis tests.
7	Ki-square test and one-sample t-test.
8	Independent samples t-test.
9	One-way ANOVA and Post-hoc tests.
10	Dependent samples t-test.
11	Repeated measures t-test.
12	Correlation.
13	Simple linear regression.
14	Multiple linear regression.
15-16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,			X
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	X		
3	Ability to relate knowledge across disciplines,		X	
4	Has information about impact of technological developments on science teaching,			X
5	Has information about multi-versatile assessment and evaluation in science and technology course,		X	
6	Has information about science and technology course curriculum,			X
7	To gain to comparison skills of science teaching in Turkey and in the world,			X
8	To suggest to solutions encountered difficulties in science education,			X
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	X		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	X		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Ümit ÇELEN
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	AUTUMN

COURSE CODE	541501003	COURSE NAME	Curriculum Development in Primary Education

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
FALL/SPRING	3	0	0	3	10	COMPULSORY ( ) ELECTIVE (X)	TR

COURSE CATAGORY			
Basic Science	Educational Science		Social Science

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	30
	Quiz		
	Homework		
	Project	1	30
	Report		
	Others (……)		
FINAL EXAM		1	40

PREREQUIEITE(S)	
COURSE DESCRIPTION	In this course: basic concepts of program development, theoretical foundations of curriculum development, the need for program development, dimensions of the program, issues of curriculum development models and development processes, application study to develop the program is located.
COURSE OBJECTIVES	The aim of this course; 1. Know the basic concepts of program development, 2. Understanding theoretical foundations of the curriculum development, 3. Recognition the types of programs, 4. Recognition of the program items, 5. Understanding the processes of curriculum development, 6. Analyze to gain knowledge and skills the model of curriculum development in Turkey.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	1. Know the basic concepts of program development. 2. Know theoretical foundations of the curriculum development. 3. Recognize the program types. 4. 4. Comprehend curriculum design and models. 5. Recognize the program items. 6. Understand the program development process. 7. Analyze of program development activities in Turkey and World.
TEXTBOOK	Olivia, P. F. (1988). Developing the Curriculum. Boston: Scott, Foresman and Company. Taba, Hilda (1962). Curriculum Development: Theory and Practice. New York: Harcourt, Brace and World. Tyler, R. W. (1973). Basic Principles of Curriculum and Instruction. Chicago: University of Chicago Pres. Demirel, Ö. (2009). Eğitimde Program Geliştirme. Ankara: Pegem Akademi.
OTHER REFERENCES	Varış, Fatma (1996). Eğitimde Program Geliştirme: "teori ve teknikler". Ankara: Alkım Kitapçılık Yayıncılık. Doğan, Hıfzı (1997). Eğitimde Program ve Öğretim Tasarımı. Ankara: Önder Matbaacılık. Ertürk, Selahattin (1998). Eğitimde "Program" Geliştirme. Ankara: Meteksan. Özçelik, Durmuş Ali (2010). Eğitim Programları ve Öğretim (genel öğretim yöntemleri). Pegem Akademi Yayıncılık. Bilen, Mürüvvet (2000). Planlamadan Uygulamaya Öğretim. Ankara: Anı Yayıncılık.

	Erden, Münire (1998). Eğitimde Program Değerlendirme. Ankara: Anı Yayıncılık. Erginer, E. (2008). Öğretimi Planlama, Uygulama ve Değerlendirme. Pegem A Yayıncılık: Ankara. Senemoğlu, Nuray (2002). Gelişim ve Öğrenme. Ankara: Anı Yayıncılık Sönmez, Veysel (2007). Program Geliştirmede Öğretmen El Kitabı. Ankara: Anı Yayıncılık.
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Basic concepts of the curriculum development
2	Theoretical foundations of the curriculum development
3	Basic necessity for the curriculum development
4	Elements of the curriculum development
5	Educational curriculum design and approaches
6	Trial of the curriculum
7-8	MID-TERM EXAMS
9	Assessment of the curriculum
10	Ensuring continuity in the curriculum
11	Approaches in the curriculum development (project-based learning approaches)
12	Approaches in the curriculum development (multiple intelligence theory, active learning approaches)
13	Approaches in the curriculum development (collusive learning, life-long learning, critical thinking approaches)
14	Approaches in the curriculum development (creative thinking, constructivist approaches)
15-16	FINAL EXAMS

NO	**PROGRAM OUTCOMES**	**3**	**2**	**1**
1	**Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,**		**x**	
2	**Captures logical links for the spirit of researchers, scientific, cause-effect relations,**		**x**	
3	**Ability to relate knowledge across disciplines,**		**x**	
4	**Has information about impact of technological developments on science teaching,**			**x**
5	**Has information about multi-versatile assessment and evaluation in science and technology course,**			**x**
6	**Has information about science and technology course curriculum,**	**x**		
7	**To gain to comparison skills of science teaching in Turkey and in the world,**	**x**		
8	**To suggest to solutions encountered difficulties in science education,**		**x**	
9	**Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,**		**x**	
10	**Describe a problem encountered in his/her educational field and design and conduct this research question.**			**x**

1:None. **2**:Partially contribution. **3**: Completely contribution.

Instructor(s): Assocc. Prof. Zuhal ÇUBUKCU
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	2012-2013

COURSE CODE	541501901	COURSE NAME	Special Topics

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
Fall /Spring	3	0	0	0	5	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Primary School Teaching [if it contains considerable design, mark with (√)]	Social Science
%40	%40		% 20

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	50
	Quiz		
	Homework		
	Project		
	Report		
	Others (presentation, summary of the presented discussion)		
FINAL EXAM		1	50

PREREQUISITE(S)	-
COURSE DESCRIPTION	Taking the lead for master student, "The Specialization Field Course" ensures students to acquire knowledge, skills and attitude. The content of the course is as follows: defining a problem statemant and research topic related to the thesis, exposuring the purpose and importance of the study, process of guidance for choosing a suitable method for the implementation, developing a reference list and in addition to the aforementioned concerns, knowledge regarding the initial draft plan of the study.
COURSE OBJECTIVES	Evaluations and discussions of the new developments and articles in the study fields of the students who are progressing their master thesis.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	-
COURSE OUTCOMES	By the end of this module students will be able to: 1. Choose a problem statemant and define it within the context of theoretical and / or social affects, 2. Understand the relationship between research topic and the research problem, 3. Understand and explain the importance and purpose of the study, 4. Choose one of the suitable methods devoted to the research problem and search the literature, 5. Develop an initial draft plan within the context of thesis proposal, devoted to estimated general situation of the study.
REFERENCES	Ekiz. D. (2003). Eğitimde araştırma yöntem ve metotlarına giriş. Ankara: Anı Yayıncılık. Karasar, N. (1996). Araştırmalarda rapor hazırlama yöntemi. Ankara: Pars Matbaacılık. Kuş, E. (2003). Nicel-nitel araştırma teknikleri. Ankara: Anı Yayıncılık. Marshall, C. ve Rossman G. (1989). Designing qualitive research. London: Sage Publications. Miles, M. B. ve Huberman, A. M. (1994). An expanded sourcebook qualitative data analysis. (Second Edition). California: Sage Publications, Inc.
OTHER REFERENCES	
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Subject of the thesis research
2	Literature on the subject follow-up
3	Evaluation
4	Report preparation and presentation
5	Follow-up of the literature
6	Article review
7-8	MID-TERM EXAM
9	source review
10	Evaluation
11	Follow-up of the literature
12	Article review
13	Evaluation
14	Report preparation and presentation
15-16	FINAL EXAM

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,			X
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	X		
3	Ability to relate knowledge across disciplines,		X	
4	Has information about impact of technological developments on science teaching,			X
5	Has information about multi-versatile assessment and evaluation in science and technology course,		X	
6	Has information about science and technology course curriculum,			X
7	To gain to comparison skills of science teaching in Turkey and in the world,			X
8	To suggest to solutions encountered difficulties in science education,			X
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	X		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	X		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): All instructors
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Fall

COURSE CODE	541501004	COURSE NAME	Education Policies in Turkey

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
	3	0		3	10	COMPULSORY ( ) ELECTIVE (x)	Turkish

COURSE CATEGORY			
Basic Science	Educational Science	Science Education [if it contains considerable design, mark with (√)]	Social Science
	%70		%30

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term		
	Quiz		
	Homework	1	50
	Project		
	Report		
	Others (.....)		
FINAL EXAM	Homework	1	50

PREREQUIEITE(S)	-
COURSE DESCRIPTION	Mega trends and problems related to education; Teacher education; school management; curriculum development; quality issues in education; educational finance; technology in education, instructional methods, school-community relations; multicultural education; national and international restructuring and reform efforts in educational; historical foundations of Turkish educational system; Turkish school law; structure of the Turkish education system; basic educational system; secondary education; higher education system; vocational and technical education; organizational and administrative structure of Turkish education system; structure of the Turkish Ministry of education; the role of supervision in Turkish educational system.
COURSE OBJECTIVES	1. to analyze educational policies 2. to recognize the special problems of the Turkish education system 3. Educational planning and social mobility, to examine educational system and the major management problems 4. to identify the key issues related to education 5. to analyze the results of the main problems related to education and resources 6. to see the dimensions of problems related to education, social, cultural, political, economic, psychological, philosophical, managerial, technological and so on. 7. to use the scientific method for detecting and solving problems related to education, 8. to solve problems and develop recommendations related to education-oriented projects
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	By the end of the course students should be able to: 1. Understand basic issues in educational systems in Turkey and around the world. 2. Understand historical and legal foundations of Turkish educational system. 3. Understand the structure of Turkish educational system. 4. Know subsystems of Turkish educational system. 5. Identify educational issues and provide alternative solutions to them. 6. Provide and develop projects related to issues in education.

TEXTBOOK	Ada, S. & Baysal, Z. N. (2009). Çeşitli yapıları ve yönetimleri açısından çeşitli ülkelere bir bakış. Pegem yayınları. Ankara. Ada, S. & Baysal, Z. N.(2010) Türk Eğitim Sistemi ve okul yönetimi, Pegem Akademi yayınları. Ankara. Apple, M. W. (2006). Eğitim ve iktidar.. (Çev: Ergin Bulut).Kalkedon yayınları.İstanbul. Balcı, A. (ed.) (2009). Karşılaştırmalı eğitim sistemleri. Pegem Yayınları, Ankara. Babüroğlu, O. N. (ed.) (2003). Eğitimin geleceği. Üniversitelerin ve eğitimin değişen paradigması. Sabancı Üniversitesi yayınları. İstanbul. Bourdieu, P. (1990). Reproduction in education, society and culture. Sage publication, London. DPT. Kalkınma Planları
OTHER REFERENCES	Hoy, W.K. & Miskel, G. C. (2010) Eğitim yönetimi, teori, araştırma ve uygulama. (Turan, S. çeviri ed.). Nobel Yayın Dağıtım. Ankara. Kaya. Y. K. (1993). İnsan yetiştirme düzenimiz. Yeni bir bakış Bilim yayınları, Ankara. MEB. Hükümet Programlarında Eğitim MEB. Kalkınma Planlarında Eğitim. Olssen, M.& Codd, J. (2004). Education policy: globalization, citizenship and democracy. Sage publication. London Şişman, M. & Taşdemir, İ. (2008). Türk eğitim sistemi ve okul yönetimi, Pegem Akademi yayınları, Ankara. Shor , I. & Pari, C. (ed.) (1999). Education is politics. Critical teaching across differences, K-12: United States.
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Giving information about the course content
2	Analysis of education policy
3	Special problems of the Turkish education system
4	Educational planning and social mobility
5	Fundamental problems related to education
6	The results of the main problems related to education and resources
7-8	MID-TERM EXAM
9	Approaches to planning and organization of the education system
10	Problems related to education, social, cultural, political and economic dimensions
11	Problems related to education, psychological, philosophical, managerial and technological dimensions
12	Structure and functioning of education system in Turkey to develop solutions to problems related to
13	Diagnosis of the problems related to education and the scientific method
14	Solving problems related to education-oriented projects and develop proposals
15-16	FINAL EXAM

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,		**x**	
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,			**X**
3	Ability to relate knowledge across disciplines,		**x**	
4	Has information about impact of technological developments on science teaching,			**x**
5	Has information about multi-versatile assessment and evaluation in science and technology course,		**x**	
6	Has information about science and technology course curriculum,	**X**		
7	To gain to comparison skills of science teaching in Turkey and in the world,	**X**		
8	To suggest to solutions encountered difficulties in science education,	**X**		
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	**x**		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	**x**		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Professor Ahmet Aypay
Signature: **Date:**

ESOGÜ Primary Education Department
COURSE INFORMATION FORM

SEMESTER	Fall

COURSE CODE	541501005	COURSE NAME	Environmental pollution in Turkey

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
I	3	0	0	3	10	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Science Education [if it contains considerable design, mark with (√)]	Social Science
		x	

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term		
	Quiz		
	Homework	1	30
	Project	1	70
	Report		
	Others (.....)		
FINAL EXAM			

PREREQUIEITE(S)	
COURSE DESCRIPTION	Environmental pollution in Turkey: Water, Earth, Air, radioactive pollution, and other sources of pollution, environmental-related organizations and activities, environmental education.
COURSE OBJECTIVES	Understanding the negative effects of environmental pollution. Environmental awareness development. Project preparation to prevent environmental pollution.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	1. Knows the environment and environmental issues. 2. Explain the relationship between man and the environment. 3. Describes water pollution. 4. Describes soil pollution. 5. Describes air pollution. 6. Explain global warming. 7. To explain the reasons for deforestation. 8. Describes environmental education in Turkey. 9. Explains the growing environmental problems in the world and in our country. 10. Work focuses on environmental education in primary education. 11. Prepare a project for the prevention of environmental pollution.
TEXTBOOK	1.Kocataş A., 1996,Ekoloji Çevre Biyolojisi Ege Üniversitesi Basımevi 2.Gökmen S. 2007, Genel Ekoloji Nobel Yayın 3..Gündüz T., 1994, Çevre Sorunları 4.Akman Y., 2000, Çevre Kirliliği, Çevre Biyolojisi
OTHER REFERENCES	1. Yılmaz, O., Boone, W.J. and Anderson, H.O., 2004, Views of Elementary and Middle School Turkish Students toward Environmental Issues. International Journal of Scienece Education. 2. Yoth Eco-Parliament (2007, 23 Nisan), http://www.eyep.info/indexol.asp. 3. Yücel, A. S. ve Morgil, _., 1999, Çevre Egitiminin Gelistirilmesi, BAÜ Fen bilimleri Enstitüsü Dergisi 4. Yücel, S. A. ve Morgil, _., 1998, Yüksek Ögretimde Çevre Olgusunun Arastırılması, H.Ü. Egitim Fakültesi Dergisi, 5. Yüksel S. ve Tokay S., 2004, Çevre ve İnsan, Milli Egitim Yayınları: 3842, İstanbul. 6. Wong, K.K., 2003, The Environmental Awareness of University Students in Beijing, China, Journal of Contemporary China

	7. Worsley, A., Skrzypiec, G., 1998, Environmental Attitudes of Senior Secondary School Students in South Australia, Global Environmental Change 8. Yeung, S.P.M., 1998, Environmental Consciousness among Students in Senior Secondary Schools: The Case of Hong Kong, Environmental Education Research 9. Yıldız, K., Baykal, T., ve Altın, M., 2002, Çevrenin Tanınması ve Öneminin Kavranmasına Yönelik Örnek Bir Sulak Alan Çalısması, G.Ü. Gazi Egitim Fakültesi Dergisi. 10. Yılmaz, A., Morgil, _., Aktug, P. ve Göbekli, _., 2002, Ortaögretim ve Üniversite Ögrencilerinin Çevre, Çevre Kavramları ve Sorunları Konusundaki Bilgileri ve Öneriler, Hacettepe Üniversitesi Egitim Fakültesi 11. Yılmaz, O., Boone, W.J. and Anderson, H.O., 2004, Views of Elementary and Middle School Turkish Students toward Environmental Issues. International Journal of Scienece Education 12. Yoth Eco-Parliament http://www.eyep.info/indexol.asp.Yücel, A. S. ve Morgil, _., 1999, Çevre Egitiminin Gelistirilmesi, BAÜ Fen bilimleri Enstitüsü Dergisi
TOOLS AND EQUIPMENTS REQUIRED	Computer, Projector

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Environment and environmental problems
2	People and the environment.
3	Water pollution.
4	Soil pollution.
5	Air pollution.
6	Global warming.
7-8	
9	Causes of extinction of forests.
10	Environmental education in Turkey.
11	Increasing environmental problems in the world and in our country.
12	Studies on environmental education in primary education.
13	Projects to prevent environmental pollution.
14	Projects to prevent environmental pollution.
15-16	

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course		**x**	
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	**x**		
3	Ability to relate knowledge across disciplines,		**x**	
4	Has information about impact of technological developments on science teaching.		**x**	
5	Has information about multi-versatile assessment and evaluation in science and technology course,		**x**	
6	Has information about science and technology course curriculum,			**x**
7	To gain to comparison skills of science teaching in Turkey and in the world,		**x**	
8	To suggest to solutions encountered difficulties in science education,		**x**	
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities	**x**		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	**x**		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Assistant Prof. Cavide DEMİRCİ 29/11/2012
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	2012-2013

COURSE CODE	541501006	COURSE NAME	Theories of Science Teaching

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
FALL	3	0	0	3	10	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Primary School Teaching [if it contains considerable design, mark with (√)]	Social Science
%60	%40		

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	30
	Quiz		
	Homework	1	20
	Project		
	Report		
	Others (……)		
FINAL EXAM		1	50

PREREQUIEITE(S)	
COURSE DESCRIPTION	**Science Education Standards, Active Processes in Science Teaching, Science Teaching Based on Scientific Method Process;** teaching approaches such as scientific thinking, scientific inquiry, science literacy, science teaching based on cognitive / intellectual reasoning, **Scientific Nature of Creativity, The Relationship Between Creativity and Science Education, The Rule of the Golden Ratio and Education Pyramid Model, Phenomenon, Concepts and Laws in Science Education;** the nature of the scientific concepts, how is access to knowledge, scientific knowledge and features, **Strategies, Methods and Techniques Used in the Teaching of Science Concepts;** configuration science-related concepts in the mind and new approaches in the teaching of concepts, learning / teaching challenges encountered in science education, identifying misconceptions and correction ways, concept development process and examining the studies related on these issues, **The Impact of Technological Developments in Science Teaching;** features of variety education technologies and its pace in the teaching process, contribution of technology education to the science literacy, **Learning Research Contents in Science Education;** individual students' submitting of - by designing scientific activities - one of the subjects containing current high level of advanced scientific concepts and knowledge by using suitable teaching methods and debating this issue in the class under the guidance of a faculty member after examining and investigating studies related to this issue and making recommendations for effective and efficient science teaching.
COURSE OBJECTIVES	It is intended to develop students' knowledge about learning methods and technology which must be selected in order to transfer them effectively to science and education, scientific development, strategies, methods and techniques used in the teaching concepts related to science, configuration science concepts in the mind, examine scientific processes, the nature of science, teaching theories with their critics by using questioning logic, develop more creative and scientific thinking; how, what and for what to use the things in the classroom.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	11. Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course, 12. Analyses science processes and nature of the science with their critiques by using questioning logic,

	13. Captures logical links for the spirit of researchers, scientific, cause-effect relations, 14. Explains the similarities and differences between research and technological design in science, 15. Ability to relate knowledge across disciplines, 16. Increasing intellectual tolerance limits, increasing the ability/level of scientific thinking, 17. Learning the impact of technological developments on science teaching.
TEXTBOOK	1. Karamustafaoğlu, O. ve Yaman S. (2006). *Fen Eğitiminde Özel Öğretim Yöntemleri I-II*. Anı Yayıncılık, 2. Fen Eğitimi alanında yapılmış çalışmalar ve metod kitapları.
OTHER REFERENCES	1. Taşkın, Ö. (2008). *Fen ve teknoloji öğretiminde yeni yaklaşımlar.* Ankara: PegemA 2. Chaille, C., & Britain, L. (2003). *The young child as scientist.* New York: A & B 3. Çepni, S.(2005). *Kuramdan Uygulamaya Fen ve Teknoloji Öğretimi*. Ankara: PegamA, 4. Şimşek, N., ve Çınar, Y. (2008). *Fen ve Teknoloji Öğretimi.* Ankara: Anı Yayıncılık 5. Ülgen, Gülten (2001). *Kavram Geliştirme Kuramlar ve Uygulamalar.* PegemA Yayıncılık 6. Topsakal, Sebahattin (2000). *Fen Bilgisi Öğretimi*. Alfa Yayıncılık 7. Temizyürek Kamil (2003). *Fen Öğretimi ve Uygulamaları*. Nobel Yayın Dağıtım 8. Aşağıda adı geçen kitaplardan tercihe göre okunması tavsiye edilmektedir. Margaret Muckenhoupt. (1997).*Bilinçdışının Kaşifi: Sigmund Freud*. Ankara: TÜBİTAK Sargun. A. Tont (1997). *Sulak Bir Gezegenden Öyküler*. Ankara: TÜBİTAK L. Vlasov., & D. Trifonov. (1977). *107 Kimya Öyküsü*. Ankara: TÜBİTAK Jane Bingham. *Bilimsel Deneyler*. TÜBİTAK Peter Adamczyk – Paul Francis Law. *Elektrik ve Manyetizma*. TÜBİTAK Daniel Todes. (2000). *Hayvan Makinesi Araştırırken: Ivan Pavlov*. Ankara: TÜBİTAK Bobbi Searle. *Şaşırtıcı Fen Projeleri*. Altın Kitaplar Yayınevi
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Science Education Standards, Active Processes in Science Teaching
2	Science Teaching Based on Scientific Method Process: teaching approaches such as scientific thinking, scientific inquiry, science literacy, science teaching based on cognitive / intellectual reasoning
3	Scientific Nature of Creativity, The Relationship Between Creativity and Science Education
4	The Rule of the Golden Ratio and Education Pyramid Model
5	Phenomenon, Concepts and Laws in Science Education: the nature of the scientific concepts, how is access to knowledge, scientific knowledge and features
6	Strategies, Methods and Techniques Used in the Teaching of Science Concepts
7-8	MID-TERM EXAM
9	Configuration science-related concepts in the mind and new approaches in the teaching of concepts
10	Learning / teaching challenges encountered in science education, identifying misconceptions and correction ways, concept development process and examining the studies related on these issues
11	The Impact of Technological Developments in Science Teaching: features of variety education technologies and its pace in the teaching process, contribution of technology education to the science literacy
12	Learning Research Contents in Science Education
13	Individual students' submitting of - by designing scientific activities - one of the subjects containing current high level of advanced scientific concepts and knowledge by using suitable teaching methods
14	Students'debating in science education in the class under the guidance of a faculty member after examining and investigating studies related to this issue and making recommendations for effective and efficient science teaching.
15-16	FINAL EXAM

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,	**x**		
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,		**x**	
3	Ability to relate knowledge across disciplines,	**x**		
4	Has information about impact of technological developments on science teaching,	**x**		
5	Has information about multi-versatile assessment and evaluation in science and technology course,		**x**	
6	Has information about science and technology course curriculum,		**x**	
7	To gain to comparison skills of science teaching in Turkey and in the world,		**x**	
8	To suggest to solutions encountered difficulties in science education,	**x**		
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,		**x**	
10	Describe a problem encountered in his/her educational field and design and conduct this research question.			**x**
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Doç. Dr. Özden TEZEL
Signature: **Date:** 19.01.2012

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	

COURSE CODE	541501007	COURSE NAME	Human, Nature and Science

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
	3	0	0	3	10	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Science Education [if it contains considerable design, mark with (√)]	Social Science
			X

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	40
	Quiz		
	Homework		
	Project		
	Report		
	Others (……)		
FINAL EXAM		1	60

PREREQUIEITE(S)	
COURSE DESCRIPTION	Relations between science, nature, human and community, sociological foundations of science and knowledge, the importance of society and education in scientific development, philosophy of science, science in a free society, the relationship between science and government, the relationship between science and sociology, freedom and authority in education and science, policies of education and science, shaping of knowledge and truth in society, science and contemporary society, science and social changing, the tradition of criticism in science and society, paradigms and the community.
COURSE OBJECTIVES	1. To understand the relationship between science, human and nature. 2. To question the relationship between science and government. 3. To produce thought about concepts of autonomy, freedom and authority in education and science. 4. To examine the policies of education and science . 5. To understand the relationship between science and social changing 6. To notice the sociological foundations of science and knowledge. 7. To question the relationship between criticism in science and society and scientific thinking skills development. 8. To have critical thinking skill related to developments in scientific thinking and scientific endeavors, works and their qualitifies which influence discoveries and events in that period.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	1. To understand the relationship between science, human and nature. 2. To question the relationship between science and government. 3. To produce thought about concepts of autonomy, freedom and authority in education and science. 4. To examine the policies of education and science . 5. To understand the relationship between science and social changing 6. To notice the sociological foundations of science and knowledge. 7. To question the relationship between criticism in science and society and scientific thinking skills development. 8. To have critical thinking skill related to developments in scientific thinking and scientific endeavors, works and their qualitifies which influence discoveries and events in that period.

TEXTBOOK	Aydın, A. (2000). Düşünce Tarihi ve İnsan Doğası. Alfa Yayınları, İstanbul Bozkurt, N. (1998). 20.yy Düşünce Akımları, Yorumlar ve Eleştiriler. Sarmal Yayınevi. Berry, A. (1998). Bilimin Arka Yüzü. TÜBİTAK Yayınları. (5. Basım). Ankara. Feyerabend, P. (1991). Özgür Bir Toplumda Bilim. Ayrıntı Yayınları. İstanbul. Gürel, O. (2001). Doğa Bilimleri Tarihi. İmge Kitabevi, İstanbul. Kuhn, T. (2000). Bilimsel Devrimlerin Yapısı. Alan Yayıncılık. (5. Basım). İstanbul. Mayor, F. & Forti, A. (1995) Bilim ve İktidar. TÜBİTAK Yayınları. Ankara. Popper, K.R. (2001). Daha İyi Bir Dünya Arayışı. Yapı Kredi Yayınları. İstanbul. Russel, B. (1995). Sorgulayan Denemeler. TÜBİTAK Yayınları, Ankara. Tekeli, S. ve diğerleri (1997). Bilim Tarihi. Doruk Yayınları. İstanbul. Topdemir, H.G. & Unat, Y. (2008). Bilim Tarihi. Pegem Akademi Yayıncılık. Ankara. Wallerstein, I. (2003). Bildiğimiz Dünyanın Sonu. 21. yy İçin Sosyal Bilim. Metis Yayınları, İstanbul. Yıldırım, C. (1997). Bilim Tarihi. Remzi Kitabevi , İstanbul
OTHER REFERENCES	
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Relations between science, nature, human and community,
2	sociological foundations of science and knowledge
3	philosophy of science,
4	philosophy of science,
5	science in a free society,
6	science in a free society,
7-8	MID-TERM EXAM
9	the relationship between science and government, the relationship between science and sociology
10	policies of education and science
11	science and contemporary society,
12	science and social changing,
13	the tradition of criticism in science and society,
14	paradigms and the community
15-16	FINAL EXAM

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,	**X**		
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	**X**		
3	Ability to relate knowledge across disciplines,	**X**		
4	Has information about impact of technological developments on science teaching,	**X**		
5	Has information about multi-versatile assessment and evaluation in science and technology course,	**X**		
6	Has information about science and technology course curriculum,	**X**		
7	To gain to comparison skills of science teaching in Turkey and in the world,	**X**		
8	To suggest to solutions encountered difficulties in science education,	**X**		
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	**X**		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	**x**		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Yrd. Doç. Dr. İlknur ŞENTÜRK **Signature**:
Date:

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Fall

COURSE CODE	541501008	COURSE NAME	Issues in Science Education

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
I.	3	0	-	3	10	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Science Education [if it contains considerable design, mark with (√)]	Social Science

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	30
	Quiz		
	Homework	1	30
	Project		
	Report		
	Others (.....)		
FINAL EXAM	Final exam	1	40

PREREQUIEITE(S)	
COURSE DESCRIPTION	Science education concept, and science literacy, structure of science education and teaching and general status in the world and encountered difficulties. Structure of science education and teaching and general status in Tukey and encountered difficulties(content, technique, time, facilities, design of materials, using laboratory, measurement and evaluation, personal discrepancies in the classroom, evaluation studies, applications, counseling of teacher, etc.). Comparison of science teaching in Turkey and in the world(discrepancies and similarities). Teacher, student and curator tasks for realizing of efficient and abundant science teaching, teaching and learning process and to be discussed of problems which originating from education system, alternative solution ways in the light of new orientations in science education and to be discussed of suggestions.
COURSE OBJECTIVES	To determine of challenges of science education and teaching in the world and in Turkey and to generate the solution ways to challenges in this area.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Remain in possession of the challenges of science education and teaching, and has a solution skills about encountered challenges in this area in his/her
COURSE OUTCOMES	1.Determine of structure of science education and teaching and general status and encountered difficulties in the world and in Turkey 2. Gain to comparison skills of science teaching in Turkey and in the world 3.Suggest to solutions encountered difficulties in science education 4. Confirm to teaching and learning process and to be discussed of problems which originating from education system
TEXTBOOK	1. International articles about subject**s** 2. Topsakal, S., Fen ve Teknoloji Öğretimi, Nobel yayıncılık, 2006. 3.Editör: Aydoğdu, M. Kesecioğlu, T., İlköğretimde Fen ve Teknoloji Öğretimi, Anı Yayıncılık, 2005. 4.Editör: Taşkın, Ö., Fen ve Teknoloji Öğretiminde Yeni Yaklaşımlar, Pegem Yayıncılık, 2008. 5 .Karamustafaoğlu, O., Yaman, S., Fen Eğitiminde Özel Öğretim Yöntemleri I-II, Anı Yayıncılık, 2006. 6. Topsakal, S., Fen Öğretimi, Nobel yayınevi, 2. Baskı, Şubat 2006.
OTHER REFERENCES	*7. İnternet Sources*
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Science education concept, and science literacy
2	Structure of science education and teaching and general status in the world and encountered difficulties
3	Structure of science education and teaching and general status in the world and encountered difficulties
4	Structure of science education and teaching and general status in the world and encountered difficulties
5	Structure of science education and teaching and general status in Tukey and encountered difficulties(content, technique, time, facilities, design of materials, using laboratory, measurement and evaluation, personal discrepancies in the classroom, evaluation studies, applications, counseling of teacher, etc.)
6	Structure of science education and teaching and general status in Tukey and encountered difficulties(content, technique, time, facilities, design of materials, using laboratory, measurement and evaluation, personal discrepancies in the classroom, evaluation studies, applications, counseling of teacher, etc.)
7-8	MID-TERM EXAM
9	Structure of science education and teaching and general status in Tukey and encountered difficulties(content, technique, time, facilities, design of materials, using laboratory, measurement and evaluation, personal discrepancies in the classroom, evaluation studies, applications, counseling of teacher, etc.)
10	Comparison of science teaching in Turkey and in the world(discrepancies and similarities)
11	Teacher, student and curator tasks for realizing of efficient and abundant science teaching, teaching and learning process and to be discussed of problems which originating from education system
12	Teacher, student and curator tasks for realizing of efficient and abundant science teaching, teaching and learning process and to be discussed of problems which originating from education system
13	Alternative solution ways in the light of new orientations in science education and to be discussed of suggestions
14	Alternative solution ways in the light of new orientations in science education and to be discussed of suggestions
15-16	FINAL EXAM

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course		x	
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations	x		
3	Ability to relate knowledge across disciplines	x		
4	Has information about impact of technological developments on science teaching		x	
5	Has information about multi-versatile assessment and evaluation in science and technology course		x	
6	Has information about science and technology course curriculum	x		
7	To gain to comparison skills of science teaching in Turkey and in the world	x		
8	To suggest to solutions encountered difficulties in science education	x		
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities	x		
10	Describe a problem encountered in his/her educational field and design and conduct this research question	x		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Asist.Prof. Dr. M. Zafer Balbağ
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Fall

COURSE CODE	541501009	COURSE NAME	Alternative Learning and Teaching Processes at Science Education

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
Fall	3	0	0	3	10	COMPULSORY ☐ ELECTIVE ☒	Turkish

COURSE CATAGORY

Basic Science	Educational Science		Social Science
40	60		

ASSESSMENT CRITERIA

	Evaluation Type	Quantity	%
MID – TERM	Mid-Term		
	Quiz		
	Homework	1	25
	Project	1	25
	Report		
	Others (Apllying)	2	50
FINAL EXAM			

PREREQUIEITE(S)	-
COURSE DESCRIPTION	Determination of outdoor education in science teaching and performing alternative activities (outdoor education, project based learning, process based learning etc.) of school practices within the program. School activities outside the scope of design and application oriented courses to professional life.
COURSE OBJECTIVES	Teacher candidates are expected to provide a rich learning at their teaching proffesion. Therefore, it is aimed to enable them to perform all kinds of learning activities outside of school and the requirement is intended to transfer content to create a practical manner to the teachers.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	End of this course, teacher candidate will have the necessary knowledge and skills for the realization an effective and efficient teaching by planning alternative processes (outdoor education, project based learning, process based learning). They will use different ways to arrange learning processes. They can also perform the appropriate activities to different conditions and social structures in their professional lives. Objectives in alternative learning environment, to differentiate the learning environment, to make students are more interested in science and to make it more successful in science subjects.
COURSE OUTCOMES	1. Teacher candidates understand why we needalternative learning and teaching process. 2. Teacher candidates know contributions to science education. 3. Teacher candidates know application of project cycle to alternative science teaching. 4. They prepare aim to create the appropriate environment for the activity content and learner characteristics. 5. They discuss importance of planning the alternative learning and teaching activities. 6. They know positive and negative parts of alternative learning activities and find solutions. 7. They design and apply appropriate alternative science activities by using teaching strategy, methods and techniques. 8. They design alternative assesment for alternative learning and teaching processes.
TEXTBOOK	Ekici, G. & Güven, M. (2013). Öğrenme - öğretme yaklaşımları ve uygulama örnekleri. Ankara: PegemA Yayıncılık.
OTHER REFERENCES	Karademir, E. (2014). Benim Fenim Projesi, TÜBİTAK 4004. Karademir, E. (2014). "Bilim Merkezi ve Uzay Evi Etkinlikleri ile Öğretmen Adaylarının Okul Dışı Fen Öğretimi Algılarının Belirlenmesi", Uluslararası Katılımlı 2. Türkiye Bilim Merkezleri Sempozyumu, 2014, Bursa. Karademir, E. (2013). Öğretmen ve öğretmen adaylarının fen ve teknoloji dersi

	kapsamında okul dışı öğrenme etkinliklerini gerçekleştirme amaçlarının planlanmış davranış teorisi yoluyla belirlenmesi (Yayınlanmamış Doktora Tezi). Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü, Ankara. Duman, B. (2000). Öğrenme Öğretme Kuramları ve Süreç Temelli Öğretim. Ankara: Anı Yayıncılık. Laçin Şimşek, C. (2011) (ed.). Fen öğretiminde okul dışı öğrenme ortamları. Ankara: Pegem A yayıncılık. Bahar, M. (2006) (Ed.). Fen ve teknoloji öğretimi. Ankara: PegemA Yayıncılık. Çepni, S. (2009) (Ed.). Kuramdan Uygulamaya fen ve teknoloji öğretimi. Ankara: PegemA Yayıncılık. Aydoğdu, M. & Kesercioğlu, T. (2005). İlköğretimde Fen ve Teknoloji Öğretimi. Ankara: Anı Yayıncılık. Şahan, M. (2005). Müze ve Eğitim. Türk Eğitim Bilimleri Dergisi. Cilt III (4), 487-501. Bozdoğan, A. E. (2007). Bilim ve Teknoloji Müzelerinin Fen Öğretimindeki Yeri ve Önemi. Ankara: Gazi Üniversitesi (Yayımlanmamış doktora tezi
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Introduction to alternative learning and teaching activities
2	Literature and applying samples about outdoor science education
3	To explore outdoor education environments at science curriculum and design activities and lesson plan
4	Relation between project cycle, project based learning and outdoor education
5	To discuss and determine the activities in the course
6	To prepare assesment forms for activities in the course
7-8	Midterm
9	Literature and applying samples about process based learning activities
10	To explore process based learning environments at science curriculum and design activities and lesson plan
11	To apply designed alternative learning and teaching activities
12	To apply designed alternative learning and teaching activities
13	To apply designed alternative learning and teaching activities
14	To apply designed alternative learning and teaching activities
15-16	Final exams

NO	**PROGRAM OUTCOMES**	**3**	**2**	**1**
1	Ability to understand and apply the knowledge of basic sciences	☒	☐	☐
2	Ability to plan and prepare teaching activities and to use teaching principles, methods and techniques at science education	☒	☐	☐
3	Ability to transfer the knowledge that is learned at science to daily life and ability to explain this transference to third persons	☒	☐	☐
4	Ability to understand the place and importance of science at life-long learning and to apply it when necessary and make connection with other disciplines	☒	☐	☐
5	Ability to follow and interpret the contemporary issues	☒	☐	☐
6	Ability to work in cooperation and to gain career and ethical responsibility	☒	☐	☐
7	Ability to develop science literacy based on the purposes of the basic science education	☒	☐	☐
8	Ability to investigate new science curriculums (acquisition, teaching-learning process, evaluation techniques etc.)	☒	☐	☐
9	Ability to explain natural events based on scientific basis.	☒	☐	☐
10	To acquire scientific process skills and ability to facilitate the life by using these skills at different parts of life	☒	☐	☐
11	Ability to use method and techniques in accordance with specifications of personal development of students.	☒	☐	☐
12	Ability to present course by using science curriculums and to arrange equipment and materials.	☒	☐	☐
13	Ability to identify and solve the problems in accordance with stages.	☒	☐	☐
1: None **2**: Partially contribution **3**: Completely contribution				

Date:
Instructor(s):
Signature:

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Spring

COURSE CODE	541502001	COURSE NAME	Research Methods in Education II

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
	3	0		3	10	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATEGORY			
Basic Science	Educational Science	Science Education [if it contains considerable design, mark with (√)]	Social Science
	%80		%20

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	30
	Quiz		
	Homework		
	Project	1	30
	Report		
	Others (……)		
FINAL EXAM		1	40

PREREQUIEITE(S)	-
COURSE DESCRIPTION	- Knowledge base of different qualitative research methods, - Different qualitative research designs, - Basic steps of qualitative research, - Implementation of qualitative data analysis, - Examination of a sample qualitative research topic, cover the content of this course.
COURSE OBJECTIVES	The main purpose of this course to help students to be able to plan, design, execute, report in education. Theoretical knowledge on various research methods will be acquired, from conceptualization to operationalization carrying out research will be executed. Students will understand, explain, predict, develop proposal, implement those proposals, interpret and report research results.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	At the end of the course, the students should be able to: 1. understand knowledge base in different qualitative research methods, 2. learn qualitative research designs, 3. comprehend basic steps of qualitative research, 4. interpret qualitative data analysis, 5. use qualitative research methods in education effectively, 6. plan, design, interpret and report an independent qualitative research
TEXTBOOK	1. Balcı, A. (2000). Sosyal bilimlerde araştırma (5. Baskı), Pegema Yayıncılık, Ankara. 2. Miles, M. B. & Huberman, A. M. (1994). An Expanded Sourcebook: Qualitative Data Analysis. Sage: London. 3. Patton, M. Q. (2002). Qualitative Research & Evaluation Methods (3.Baskı). Sage Publications, Thousand Oaks. 4. Yıldırım, A ve Şimşek, H. (1994). Sosyal Bilimlerde Nitel Araştırma Yöntemleri. Ankara 5. Articles (will be submitted by the instructor).
OTHER REFERENCES	*S.B. Merriam, Qualitative research and case study applications in education, San Francisco: Jossey-Bass, 1998.*
TOOLS AND EQUIPMENTS REQUIRED	-

COURSE SYLLABUS	
WEEK	**TOPICS**
1	**I Introduction** Emergence-first research studies Basic concepts Philosophical foundations Basic characteristics
2	What kind of research topics and what kind of areas What kind of results are obtained Qualitative or Quantitative
3	**II Types** Fenomenology Etnography Grounded theory Case study Field research
4	Action research Biography Narratives Hermeneutical Group focused studies (type of analysis)
5	**III Sampling and types** *(Purposive-Judgement sampling, Convenience sampling, quota sampling, theoretical sampling, snowball sampling)*
6	**IV Analysis** **A. Types of analysis** Typology, John Lofland & Lyn Lofland Taxonomy ve Domain Analysis James Spradley Constant Comparison/Grounded Theory Anselm Strauss Analytic Induction F. Znaniecki, Howard Becker, Jack Katz.
7-8	MID -TERM
9	Logical Analysis/Matrix Analysis Matthew Miles ve Huberman Quasi-statistics Howard Becker Event Analysis/Microanalysis, Frederick Erickson, Kurt Lewin, Edward Hall, Erving Goffman Metaphorical Analysis Michael Patton, Nick Smith Hermeneutical Analysis Max Van Manen
10	Phenomenology/Heuristic Analysis Clark Moustakas Discourse analysis James Gee Narrative Analysis Catherine Reisman Semiotics Peter Manning Content Analysis R. P. Weber
11	**B. Types and characteristics of interview** i. Tightly structured ii. Structured iii. Loosely structured **C. Observation** (Participant Observation, Nonparticipant Observation) **Observation records** **D. Document analysis and artifact analysis**
12	**V Coding of data** **A. Data sources and characteristics** **B. Analsis** i. Data recording and transcription (video, audio, paper-pencil) Coding types (Levels, processes, titles, perceptions, open areas) **Categories and the formation process of themes and cautions (**Open Coding, Axial Coding, Selective Coding) **C.Qualitative analysis types according to analysis**
13	**VI Validity, Reliability, Generalizability,** Triangulation: - Member Checking: - Outlier Analysis: - Pattern Matching: - Representativeness Check: - Coding Check multiple coders: - Prolonged engagement

	- Persistent observation - Referential adequacy - Peer debriefing - Reflexive journal - Thick description - Purposive sampling Audit trail. (Lincoln and Guba, Erlandson et al. 1993)
14	**VII Reporting**
15-16	FINAL EXAM

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,			X
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	X		
3	Ability to relate knowledge across disciplines,		X	
4	Has information about impact of technological developments on science teaching,			X
5	Has information about multi-versatile assessment and evaluation in science and technology course,		X	
6	Has information about science and technology course curriculum,		X	
7	To gain to comparison skills of science teaching in Turkey and in the world,			X
8	To suggest to solutions encountered difficulties in science education,		X	
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,			X
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	X		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Prof. Dr. M. Bahaddin Acat
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Spring

COURSE CODE	541502002	COURSE NAME	Education Statistics II

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
	3	0		3	10	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Master degree [if it contains considerable design, mark with (√)]	Social Science

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term		
	Quiz		
	Homework	1	40
	Project		
	Report		
	Others (……)		
FINAL EXAM		1	60

PREREQUIEITE(S)	None
COURSE DESCRIPTION	- Basic concept related to statistics - Sampling methods - theoretical distributions - Central tendency and dispersion, - Correlation and regression analysis, - Hypothetical test, cover the content of this course.
COURSE OBJECTIVES	Students calculate the descriptive statistics of variables which is in education, and interpret hypothesis tests aimed to examine the relationships between variables using
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	At the end of the course, the students will be able to: 1. comprehend main knowledge related statistic terms (population, sample, parameter, statistic, variable, variables types, measurement, scale, scales types, distribution), 2. understand sampling methods, 3. know theoretical distributions (normal and binomial distributions), 4. recognize central tendency (mean, mod, median) and dispersion (range, standard deviation, variance, standard error, variation coefficient), 5. comprehend correlation and regression analysis, 6. know hypothetical tests (parametric and nonparametric tests, univariate statistics).
TEXTBOOK	1. Alpar, R. (2001). Spor Bilimlerinde Uygulamalı İstatistik. Nobel Yayınları, Ankara. 2. Arıcı, H. (2005). İstatistiksel Yöntemler. Meteksan, Ankara.
OTHER REFERENCES	3. Baykul, Y. (1997). İstatistik, Metodlar ve Uygulamalar. Anı Yayıncılık, Ankara. 4. Büyüköztürk, Ş. (2007). Sosyal Bilimler İçin Veri Analizi El Kitabı. 8. Baskı, Pegem A Yayınları, Ankara. 5. Hovardaoğlu, S. (1994). Davranış Bilimleri İçin İstatistik. Hatipoğlu Yayınları, Ankara. 6. Karasar, N. (2000). Bilimsel Araştırma Yöntemi: Kavramlar, İlkeler, Teknikler. 10. Baskı, Nobel Yayınları, Ankara. 7. Özdamar, K. (1999). Paket Programlar ile İstatistiksel Veri Analizi. Kaan Kitabevi, Eskişehir. 8. Siegel, S. (1977). Davranış Bilimleri İçin Parametrik Olmayan İstatistikler.

	Çeviren: Yurdal Topsever, A.Ü. Dil ve Tarih Coğrafya Fakültesi Yayınları, Ankara. 9. Tatlıdil, H. (1992). Uygulamalı Çok Değişkenli İstatistiksel Analiz. Ankara.
TOOLS AND EQUIPMENTS REQUIRED	

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Meeting and introducing
2	Basic concept related to statistics (population, sample, parameter, statistic, variable, variables types, measurement, scale, scales types, distribution)
3	Sampling methods
4	Theoretical distributions (normal and binomial distributions)
5	Central tendency (mean, mod, median) and dispersion (range, standard deviation, variance, standard error, variation coefficient
6	Central tendency (mean, mod, median) and dispersion (range, standard deviation, variance, standard error, variation coefficient
7-8	MID-TERM EXAM
9	Correlation analysis
10	Regression analysis
11	Hypothetical tests (parametric and nonparametric tests, univariate statistics).
12	Descriptive statistical calculations
13	Descriptive statistical calculations
14	Evaluation
15-16	FINAL EXAM

NO	**PROGRAM OUTCOMES**	**3**	**2**	**1**
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,		**x**	
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,			**X**
3	Ability to relate knowledge across disciplines,		**x**	
4	Has information about impact of technological developments on science teaching,			**x**
5	Has information about multi-versatile assessment and evaluation in science and technology course,		**x**	
6	Has information about science and technology course curriculum,	**X**		
7	To gain to comparison skills of science teaching in Turkey and in the world,	**X**		
8	To suggest to solutions encountered difficulties in science education,	**X**		
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	**x**		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	**x**		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Prof. Dr. Ahmet AYPAY
Signature: **Date:**

ESOGÜ Department of Educational Sciences
Course Informatıon Form

SEMESTER	Spring

COURSE CODE	541502003	COURSE NAME	Seminar

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
Spring	0	3	0	0	10	COMPULSORY (X) ELECTIVE ( )	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Science Education [if it contains considerable design, mark with (√)]	Social Science
% 40	%40		% 20

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Article review		
	Research assignment	1	30
	Project	1	30
	Final Exam	1	40
	Report		
	Others (……)		
FINAL EXAM			

PREREQUIEITE(S)	-
COURSE DESCRIPTION	In this course, students prepare a study with responsible instructor for the course using the scientific method on a given problem, and share work in the classroom.
COURSE OBJECTIVES	The main aim of the course is to gain skills like as accessing scientific data, using data, making an assessment and preparing a presentation before they pass thesis stage.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	-
COURSE OUTCOMES	By the end of this course students will be able to: 1. notice a problem in the relevant field. 2. effectively use the scientific process. 3. develop alternative solutions about this problem. 4. write a scientific report. 5. effectively.present their resarch reports .
TEXTBOOK	APA (2009). *Amerikan psikoloji derneği yayım kılavuzu.* İstanbul: Kaknüs Yayınları.
OTHER REFERENCES	Türkiye Bilimler Akademisi (2002). *Bilimsel araştırmada etik ve sorunları.* Ankara: TUBA
TOOLS AND EQUIPMENTS REQUIRED	Computer

OURSE SYLLABUS	
WEEK	**TOPICS**
1	Current developments and problems in the field
2	Determining a problem
3	The literature review
4	Preparing a research proposal
5	Data collection
6	Data collection
7-8	MID -TERM
9	Data analysis
10	Data analysis
11	Results
12	Conclusions and recommendations
13	Writing research report
14	Presentation of researh report
15-16	FINAL EXAM

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,			X
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	X		
3	Ability to relate knowledge across disciplines,		X	
4	Has information about impact of technological developments on science teaching,			X
5	Has information about multi-versatile assessment and evaluation in science and technology course,		X	
6	Has information about science and technology course curriculum,			X
7	To gain to comparison skills of science teaching in Turkey and in the world,			X
8	To suggest to solutions encountered difficulties in science education,			X
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	X		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	X		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): All instructors
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	2012-2013

COURSE CODE	541502701	COURSE NAME	Master Thesis

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	TYPE	LANGUAGE
Spring	0	1	0	0	25	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATEGORY			
Basic Science	Educational Science	Primary School Teaching [if it contains considerable design, mark with (√)]	Social Science
% 40	%40		% 20

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term		
	Quiz		
	Homework	1	50
	Project		
	Report		
	Others (presentation, summary of the presented discussion)		
FINAL EXAM		1	50

PREREQUISITE(S)	-
COURSE DESCRIPTION	The content of the course is as follows: defining a problem statemant and research topic related to the thesis, exposuring the purpose and importance of the study, process of guidance for choosing a suitable method for the implementation, developing a reference list and in addition to the aforementioned concerns, knowledge regarding the initial draft plan of the study.
COURSE OBJECTIVES	Taking the lead for master student, ensuring students to acquire knowledge, skills and attitude
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	-
COURSE OUTCOMES	By the end of this module students will be able to: 1. Choose a problem statemant and define it within the context of theoretical and / or social affects, 2. Understand the relationship between research topic and the research problem, 3. Understand and explain the importance and purpose of the study, 4. Choose one of the suitable methods devoted to the research problem and search the literature, 5. Develop an initial draft plan within the context of thesis proposal, devoted to estimated general situation of the study.
REFERENCES	Büyüköztürk,Ş.(2008). Sosyal bilimler için veri analizi el kitabı. Ankara: Pegem Akademi. Ekiz. D. (2003). Eğitimde araştırma yöntem ve metotlarına giriş. Ankara: Anı Yayıncılık. Karasar, N. (1996). Araştırmalarda rapor hazırlama yöntemi. Ankara: Pars Matbaacılık. Kuş, E. (2003). Nicel-nitel araştırma teknikleri. Ankara: Anı Yayıncılık. Marshall, C. ve Rossman G. (1989). Designing qualitive research. London: Sage Publications.
OTHER REFERENCES	Miles, M. B. ve Huberman, A. M. (1994). An expanded sourcebook qualitative data analysis. (Second Edition). California: Sage Publications, Inc. Yıldırım, A. ve Şimşek H.(2005). Sosyal bilimlerde nitel araştırma yöntemleri. Ankara: Seçkin Yayınları.
TOOLS AND EQUIPMENTS REQUIRED	Coursebook

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Basic principles in educational research
2	Problem/Purpose
3	Literature Review
4	Qualitative and quantitative research designs
5	Sampling
6	Experimental research
7-8	MID-TERM EXAM
9	Survey research – Correlational research
10	Causal research
11	Qualitative and quantitative measurement
12	Quantitative data analysis
13	Writing research report
15-16	Course evaluation

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,			X
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	X		
3	Ability to relate knowledge across disciplines,		X	
4	Has information about impact of technological developments on science teaching,			X
5	Has information about multi-versatile assessment and evaluation in science and technology course,		X	
6	Has information about science and technology course curriculum,			X
7	To gain to comparison skills of science teaching in Turkey and in the world,			X
8	To suggest to solutions encountered difficulties in science education,			X
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	X		
10	Describe a problem encountered in his/her educational field and design and conduct this research question.	X		
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): All instructors
Signature: **Date:**

ESOGÜ Primary Education Department (Science Education)
COURSE INFORMATION FORM

SEMESTER	Spring

COURSE CODE	541502004	**COURSE NAME**	New Approaches in Science Education.

SEMESTER	**WEEKLY COURSE PERIOD**			**COURSE OF**			
	Theory	**Practice**	**Labratory**	**Credit**	**ECTS**	**TYPE**	**LANGUAGE**
2	3	0	0	3	10	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATAGORY			
Basic Science	**Educational Science**	**Science Education** [if it contains considerable design, mark with (√)]	**Social Science**
		x	

ASSESSMENT CRITERIA			
	Evaluation Type	**Quantity**	**%**
MID-TERM	Mid-Term		
	Quiz		
	Homework	1	30
	Project	1	70
	Report		
	Others (.....)		
FINAL EXAM			

PREREQUIEITE(S)	
COURSE DESCRIPTION	The new approaches to science education.
COURSE OBJECTIVES	New approaches to evaluation. Identify new approaches. Approaches to explain the basic philosophy and principles. Implement new approaches.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	By the end of this course, the students will possess the required Professional skills for effective and afficient instruction.
COURSE OUTCOMES	1.Defines an active learning approach. 2. Implements an active learning approach. 3. Defines creative thinking approach. 4. Apply creative thinking approach. 5. Defines critical thinking approach. 6. Apply critical thinking approach. 7.Defines project-based learning approach. 8. Implement project-based learning approach. 9. Defines the quantum thinking. 10. Quantum thinking implements. 11. Defines the constructivist approach. 12. Constructivist approach applies.
TEXTBOOK	1.Demirel, Ö.(Ed.) 2010. Eğitimde Yeni Yönelimler, Pegem A Yayıncılık
OTHER REFERENCES	1. Sherrie L. Nist Jodi Holschuh, Active Learning. 2. Özden, Y. (2005). Öğrenme ve Öğretme, Ankara: Pegem A Yayıncılık. 3. Açıkgöz, K.Ü.(2003), Aktif öğrenme.
TOOLS AND EQUIPMENTS REQUIRED	Computer, Projector

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Active learning.
2	Active learning.
3	creative thinking.
4	creative thinking.
5	critical thinking.
6	critical thinking.
7-8	
9	project-based learning.
10	project-based learning.
11	quantum thinking.
12	quantum thinking.
13	constructivism.
14	constructivism.
15-16	

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course		**x**	
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,	**x**		
3	Ability to relate knowledge across disciplines,		**x**	
4	Has information about impact of technological developments on science teaching.		**x**	
5	Has information about multi-versatile assessment and evaluation in science and technology course,		**x**	
6	Has information about science and technology course curriculum,			**x**
7	To gain to comparison skills of science teaching in Turkey and in the world,	**x**		
8	To suggest to solutions encountered difficulties in science education,		**x**	
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities		**x**	
10	Describe a problem encountered in his/her educational field and design and conduct this research question.		**x**	
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s):
Assistant Prof. Cavide DEMİRCİ 29/11/2012
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Spring

COURSE CODE	541502005	COURSE NAME	Turkey's Water Resources

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
2	3	0	0	3	10	COMPULSORY ( ) ELECTIVE (X)	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Science Education	Social Science
		X	

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	Mid-Term	1	30
	Quiz		
	Homework	1	10
	Project	1	10
	Report		
	Others (……)		
FINAL EXAM		1	50

PREREQUIEITE(S)	
COURSE DESCRIPTION	The definition and importance of water,Water and Health, Water cycle, Distribution of Water Quantity and Water Resources of the World, .Water Pollution and Water Resources in Turkey ,Increasing Water Problems of the World and Turkey , Water Legislation, Water awareness and water education in primary education, Materials Development for Water Education
COURSE OBJECTIVES	The main aim of the course is to provide information to the students about importance of water for life, water cycle, our country water pollution and water resources, water legislation, increasing water problems in our country , water awareness and water education in primary education.
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	Water is the essential element of life and this fact will be consolidated. The required skills for water education will be gained
COURSE OUTCOMES	1.be able to learn environment and historical development of environmental science. 2. Information about the importance of water is reinforced. 3. He/She would have the skills necessary for water education 4. He/She offers suggestions for solution of current environment problems.
TEXTBOOK	*Dünyada ve Ülkemizde Su , Atila TÜRKYILMAZ, ANKARA 2010*
OTHER REFERENCES	Water quality : diffuse pollution and watershed management Vladimir Novotny Hoboken, N.J. : J. Wiley, c2003 Water quality and treatment : a handbook of community water supplies / American Water Works Association ; Raymond D. Letterman. New York : McGraw-Hill, c1999
TOOLS AND EQUIPMENTS REQUIRED	Computer, Projector

COURSE SYLLABUS	
WEEK	**TOPICS**
1	The definition and importance of water
2	Water Standarts
3	Water cycle
4	Water and Health
5	Distribution of Water Quantity and Water Resources of the World
6	Water Pollution and Water Resources in Turkey
7-8	
9	Sectoral use of water resourcesin the world and our country
10	Losses of water the world and our country
11	Water pollution and wastewater recycling
12	Increasing Water Problems of the World and Turkey
13	Water awareness and water education in primary education
14	Materials Development for Water Education
15-16	

NO	**PROGRAM OUTCOMES**	**3**	**2**	**1**
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,			**x**
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,		**x**	
3	Ability to relate knowledge across disciplines,		**x**	
4	Has information about impact of technological developments on science teaching.			**x**
5	Has information about multi-versatile assessment and evaluation in science and technology course,			**x**
6	Has information about science and technology course curriculum	**x**		
7	To gain to comparison skills of science teaching in Turkey and in the world,			**x**
8	To suggest to solutions encountered difficulties in science education,		**x**	
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,	**x**		
10	Describe a problem encountered in his/her educational field and design and conduct this research question	**x**		
1:None. **2**:Partially contribution. **3**: Completely contribution				

Instructor(s) Assoc. Prof. Dr. Cansu FİLİK İŞÇEN
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Fall

COURSE CODE	541502008	COURSE NAME	Measurement and Evaluation in Primary Education

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
FALL	3	0	0	3	10	COMPULSORY () ELECTIVE (x)	Turkish

COURSE CATAGORY			
Basic Science	Educational Science	Mechanical Engineering Profession [if it contains considerable design, mark with (√)]	Social Science
	X		

ASSESSMENT CRITERIA			
	Evaluation Type	Quantity	%
MID-TERM	1st Mid-Term		
	2nd Mid-Term		
	Quiz		
	Homework	1	40
	Project		
	Report		
	Others (……)		
FINAL EXAM		1	60

PREREQUIEITE(S)	None
COURSE DESCRIPTION	Psychometric techniques that use in primary schools; achievement tests, observation forms, self-assessment, peer-assessment, portfolio, control lists, rubrics and other techniques.
COURSE OBJECTIVES	Comprehension the psychometric techniques that use in primary schools. Development and administration psychometric instruments
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	
COURSE OUTCOMES	Knows the purpose of use of psychometric instruments, develops a proper psychometric instrument.
TEXTBOOK	*Halil Tekin, Eğitimde Ölçme ve Değerlendirme, Yargı Yayınevi.*
OTHER REFERENCES	*Fuat Turgut, Yaşar Baykul, Eğitimde Ölçme ve Değerlendirme, Pegem Akademi, Deha Doğan, Ömer Kutlu, İsmail Karakaya, Öğrenci Başarısının Belirlenmesi, Adnan Erkuş, Sınıf Öğretmenleri İçin Ölçme ve Değerlendirme, Ekinoks.*
TOOLS AND EQUIPMENTS REQUIRED	Computer

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Introducing
2	Basic terms (measurement, types of measurement, types of scales and their properties, evaluation).
3	Validity, techniques to determine validity of a psychometric instrument. Usefulness.
4	Review the primary school curriculums.
5	Developing achievement tests.
6	Preparing review forms.
7	Preparing self-assessment forms.
8	Preparing peer-assessment forms
9	Portfolio assessment.
10	Developing control lists.
11	Developing gradation scales.
12	Developing rubrics.
13	Other psychometric techniques.
14	Administrating the psychometric instruments, and interpretation the results.
15-16	Final Exam

NO	PROGRAM OUTCOMES	3	2	1
1	Has a knowledge about applications of teaching principles, theory, strategy, method and techniques in science and technology course,	X		
2	Captures logical links for the spirit of researchers, scientific, cause-effect relations,			X
3	Ability to relate knowledge across disciplines,			X
4	Has information about impact of technological developments on science teaching,			X
5	Has information about multi-versatile assessment and evaluation in science and technology course,	X		
6	Has information about science and technology course curriculum,		X	
7	To gain to comparison skills of science teaching in Turkey and in the world,		X	
8	To suggest to solutions encountered difficulties in science education,			X
9	Follow the new developments in his/her educational field, and interpret them in paralel of internatinational values and national realities,			X
10	Describe a problem encountered in his/her educational field and design and conduct this research question.		X	
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s): Ümit ÇELEN
Signature: **Date:**

ESOGU Department of Educational Sciences
Course Information Form

SEMESTER	Spring

COURSE CODE	541502009	COURSE NAME	The Nature of Science and Instruction

SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Labratory	Credit	ECTS	TYPE	LANGUAGE
II	3	0	0	3	10	COMPULSORY ☐ ELECTIVE ☒	Turkish

COURSE CATAGORY

Basic Science	Educational Science		Social Science
	x		

ASSESSMENT CRITERIA

	Evaluation Type	Quantity	%
MID – TERM	Mid-Term	1	30
	Quiz		
	Homework	1	30
	Project		
	Report		
	Others ( )		
FINAL EXAM		1	40

PREREQUIEITE(S)	-
COURSE DESCRIPTION	Teaching the nature of science
COURSE OBJECTIVES	The main purpose of this course to help students obtaining knowledge and skills regarding, approaches to the teaching of the natural sciences, common misconceptions regarding the nature of science, activities used in teaching the nature of science,
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	At the end of this course focuses on teaching the students are expected to improve awareness of science and the nature of science.
COURSE OUTCOMES	1. Have knowledge about the development of science. 2. Have information about the nature of scientific knowledge. 3. Be aware of the approaches of teaching the nature of science. 4. Have knowledge common misconceptions about the nature of science. 5. Have knowledge about the activities used in the teaching of the nature of science.
TEXTBOOK	•Doğan, N., Çakıroğlu, J., Bilican, K., & Çavuş, S. (2012). Bilimin doğası ve öğretimi. Ankara: Pegem Akademi.
OTHER REFERENCES	•McComas, W. F. (2002). The principal elements of the nature of science: Dispelling the myths. In The nature of science in science education (pp. 53-70). Springer Netherlands. •Sönmez, V. (2008). Bilim Felsefesi. Ankara: Anı Yayıncılık. •Sönmez, V. (2009). Eğitim Felsefesi. Ankara: Anı Yayıncılık. •Topdemir, H. G. (2011). Felsefe. Ankara: Pegem Yayıncılık. •Yıldırım, C. (2010). Bilim Felsefesi. İstanbul: Remzi Kitabevi. •Yıldırım, C. (2012). Bilimin Öncüleri. Ankara: Tübitak Popüler Bilim Kitapları.
TOOLS AND EQUIPMENTS REQUIRED	Computer and projection equipment

COURSE SYLLABUS	
WEEK	**TOPICS**
1	Philosophy of Science
2	Definition and Characteristics of Science
3	History of Science
4	Scientific Information and Features
5	Nature of Science
6	Characteristics of Human Sciences
7-8	
9	Approaches to the Teaching of Natural Sciences
10	Historical Approach to Teaching the Nature of Science
11	Indirect Approach to Teaching the Nature of Science
12	Teaching the Nature of Science with Explicit-Reflective Approach
13	Misconceptions about the Nature of Science
14	Activities used in the Teaching of Natural Science
15-16	

NO	PROGRAM OUTCOMES	3	2	1
1	Explain philosophical, social, economic, psychological, and historical fundamentals of curriculum development in education			X
2	Analyze and discuss curriculum development process thoroughly			X
3	Explain the teaching and learning process based on various teaching-learning theories		X	
4	Comparatively examine and evaluate the teacher training systems of turkey and various countries			X
5	Conduct a proper program evaluation study in pursuant of program evaluation process			X
6	Analyze needs and develop a draft program based on the needs analyzed.			X
7	Apply the knowledge learnt in the field to solve current educational problems		X	
8	Apply the theoretical knowledge of the field to develop the activities in various fields.	X		
9	Identify and disclosure the current problems in the field of curriculum and instruction		X	
10	Analyze and interpret the data obtained in scientific studies in the field using proper statistical methods and techniques	X		
11	Apply quantitative and qualitative research methods properly and correctly	X		
12	Report the findings of researches in the field of curriculum and instruction.		X	
13	Present the studies in the field of curriculum and instruction in scientific arrangements, meeting etc.		X	
14	Use at least one foreign languages properly and accurately		X	
15	Have scientific and ethical values and conduct researches in parallel with ethical issues	X		
16	Evaluate educational issues and problems critically and reflectively.	X		
17	Properly apply information and communication technologies in the field	X		
18	Communicate impressively	X		
1: None. **2**: Partially contribution. **3**: Completely contribution.				

Date:
Instructor(s):
Signature: