Course Syllabus

Code - Course Title	**İYE502 - New Trends in Science Education**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**6.0**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	DR. ÖĞR. ÜYESİ EMİNE AYSIN ŞENEL

Mode of Delivery	Distance education
Place of Delivery	Online
Used Educational Platforms	Online
Prerequisites	There is no prerequisite or co-requisite for this course<
Courses Recomended	None
Recommended Resources	Aslan, S, et al. Scientific Process Skills. Pegem Akademi.Demirbaş, M. (2016). Nature of Science in Science Education. Pegem Akademi.Demirci Güler, M.P. (2017). Science Education. Pegem Akademi.Doğan, N. et al. (2009). Nature of Science and Its Instruction. Pegem Akademi.Hastürk, H.G. (2017). Science Education from Theory to Practice. Pegem Akademi.Kılıç, G. B. (2006). Primary Science Education in Light of New Approaches. Morpa Yayıncılık.Yenice, N. (2015). Development and Instruction of the Nature of Science. Anı Yayıncılık.
Work Placement	None
Aims of the Course	The general objective of this course is to provide knowledge and skills regarding contemporary approaches and methods used in science education at the primary school level.

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1	**LO-1**	What is Science	Lecture, Question & Answer, Discussion
Week - 2	**LO-2**	Nature of science and approaches in teaching	Lecture, Question & Answer, Discussion
Week - 3	**LO-2**	The Nature of Science and Approaches to Its Teaching	Lecture, Question & Answer, Discussion
Week - 4	**LO-3**	Scientific Process Skills in Science Education I	Lecture, Question & Answer, Discussion
Week - 5	**LO-3**	Scientific Process Skills in Science Education II	Lecture, Question & Answer, Discussion
Week - 6	**LO-4**	Concept Teaching in Science Education	Lecture, Question & Answer, Discussion

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 7	LO-4	Approaches to Concept Teaching	Lecture, Question & Answer, Discussion
Week - 8	LO-5	Inquiry-Based Science Education	Lecture, Question & Answer, Discussion
Week - 9	LO-5	Argumentation in Science Education	Lecture, Question & Answer, Discussion
Week - 10	LO-5	Science-Technology-Society-Environment Approach	Lecture, Question & Answer, Discussion
Week - 11	LO-5	Science and Socio-scientific Issues	Lecture, Question & Answer, Discussion
Week - 12	LO-5	STEM in Science Education	Lecture, Question & Answer, Discussion
Week - 13	LO-6	Science-Technology Integration	Lecture, Question & Answer, Discussion
Week - 14	LO-7	Alternative Assessment and Evaluation in Science Education	Lecture, Question & Answer, Discussion

Learning Outcomes

#	Learning Outcome
1	Explain what science is
2	Explain the nature of science
3	Designs sample applications to develop scientific process skills.
4	Explain the concept teaching techniques used in science education.
5	Will be able to recognize some current approaches used in science education.
6	Will be able to explain technology integration in science education.
7	Will be able to explain alternative measurement-evaluation approaches which can be used in science education.

Sustainable Development Goals

✓ Quality Education

Course Theme

✓ Educational Sciences and Educational Technologies

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

✓ Open-Ended Test