



Çanakkale Onsekiz Mart University

Education Information System

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Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Physical Archaeometry	FZ5038		3 + 0	3.0	7.5

Prerequisites	None
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Language of Instruction	Turkish
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Course Level	Second Cycle
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Course Type	Elective
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Mode of delivery	Face to face
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Course Coordinator	Assist. Prof. Dr. Mülayim GÜRE
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Instructors	Prof. Dr. Osman DEMİRKAN
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Assistants	
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Course Objectives	The purpose of this course physical methods used in dating archaeological and geological material.
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Course Content	Introduction, Energy Band Model with the Luminescence Mechanism, Luminescence Energy Band Model, Optically Stimulated Luminescence (OSL), Luminescence dating, Luminescence measurements factors and preventative measures, Plato Test, Plato Test and Pre-Heating, Paleodose Evaluation Methods, One tablet method of re-dosing (SAR), Multiple tablets additive dose method (Maadi), Calculation of the contributions of alpha and beta particles, and ranges of soil materials, Effects of radon gas, Effect of humidity.
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Course Learning Outcomes	1) To learn luminescence mechanism 2) To learn optically stimulated luminescence (OSL) 3) To make luminescence dating 4) To make plato test 5) To make other methods of dating
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WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Introduction	Lecture	
2. Week	Energy Band Model with the Luminescence Mechanism	Lecture	
3. Week	Luminescence Energy Band Model	Lecture	
4. Week	Optically Stimulated Luminescence (OSL)	Lecture	
5. Week	Luminescence dating	Lecture	

Quick Access

Physics (Master)

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Course Information

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6. Week	Luminescence measurements factors and preventative measures	Lecture	
7. Week	Plato Test	Lecture	
8. Week	Plato Test and Pre-Heating	Lecture	
9. Week	Midterm Exam	Lecture	
10. Week	Paleodose Evaluation Methods	Lecture	
11. Week	One tablet method of re-dosing (SAR)	Lecture	
12. Week	Multiple tablets additive dose method	Lecture	
13. Week	Calculation of the contributions of alpha and beta particles, and ranges of soil materials	Lecture	
14. Week	Effects of radon gas	Lecture	
15. Week	Effect of humidity	Lecture	
16. Week	Final	Exam	

RESOURCES

Recommended Sources
Kosal M. "Anadolu'da bulunan bazı arkeolojik eserlerin lüminesans Yöntemi kullanılarak tarihlendirilmesi" 2009 Ankara
Aitken M. J. "Introduction to Optical Dating: The Dating of Quaternary Sediments by the Use of Photon-stimulated Luminescence" Clarendon Press (9 July 1998)

MATERIAL SHARING

ISI

ASSESSMENT

Measurement and Evaluation Methods and Techniques
Midterm Exam (40 %), Final Exam (60 %)

COURSE CATEGORY

Course Category	Percentage
Support Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5
<u>PY1</u>	2	2	3	2	2	3
<u>PY2</u>	4	4	4	4	4	4
<u>PY3</u>	2	2	2	2	2	2
<u>PY4</u>	2	2	2	2	3	2
<u>PY5</u>	2	2	2	2	2	2
<u>PY6</u>	4	4	4	4	4	4
<u>PY7</u>	2	2	2	2	2	2
<u>PY8</u>	2	2	2	2	2	2
<u>PY9</u>	3	4	4	2	2	2
<u>PY10</u>	1	1	1	1	1	1
<u>PY11</u>	1	1	1	1	1	1

<u>PY12</u>	1	1	1	1	1	1
<u>PY13</u>	1	1	1	1	1	1
<u>PY14</u>	1	1	1	1	1	1
<u>PY15</u>	1	1	1	1	1	1

*DK = Course's Contribution.

	0	1	2	3	4	5
Level of contribution	None	Very Low	Low	Fair	High	Very High

ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Class Hours (14 weeks)	16	3	48
Presentation/Seminar	1	2	2
Final Exam Preparation	1	6	6
Mid Term Exam Preparation	1	6	6
Further Study	16	3	48
Preliminary Study	14	2	28
Research&Project	8	4	32
Final Exam	1	1	1
Application/Practice	10	2	20
Mid Term Exam 1	1	1	1
Total Workload			192
Total Workload / 25.5 (s)			7.53
ECTS Credit of the Course			8