Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Space Physics	FZ5032		3 + 0	3.0	7.5

Prerequisites	None

Language of Instruction	Turkish
Course Level	Second Cycle
Course Type	Elective
Mode of delivery	Face to face
Course Coordinator	Assoc. Prof. Dr. Faruk SOYDUGAN
Instructors	Prof. Dr. Caner ÇİÇEK
Assistants	
Course Objectives	In this course, structure of Earth's upper atmosphere and Near-Space, and effect of solar particules and cosmic-rays on these mediums will be explained by extending to situations of other planets.
Course Content	Near-Earth Environment, Magnetosphere, Ionosphere, Space Plasma, Solar Magnetohydrodinamics Solar Winds, Shocks Without Collision, Solar Wind And Planetary Magnetosphere Interactions (With Special Emphasis On Earth), Some basic applications and discussing of some related papers,Planet Ionospheres Plasma-Stallite interaction. Magnetic Gathering İn Planet Magnetosphere Magnetosphere Configuration, Magnetosphere Dynamics Aurora And Aurora Ionosphere, Magnetosphere Structure İn Star Systems
Course Learning Outcomes	1) Explain Earth's upper atmosphere characteristics. 2) Analyze the state effects of particles on near-space and physical procces of interaction.

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Near-Earth Environment	Lecture	
2. Week	Magnetosphere	Lecture	
3. Week	Ionospehre	Lecture	
4. Week	Space Plasma	Lecture	
5. Week	Solar Magnetohydrodinamics	Lecture	
6. Week	Solar Winds	Lecture	

Quick Access

Physics (Master)
- Qualification Awarded
- Level of Qualification
- Qualification Requirements and Regulations
- Specific Admission Requirements
- Recognition of Prior Learning
- Profile of the Program
- Program Key Learning Outcomes
- Occupational Profile of Graduates
- Access to Further Studies
- Course Structure & Credits
- Exam Regulations & Assessment & Grading
- Graduation Requirements
- Mode of Study
- Programme Director(or Equivalent)
- Evaluation Questionnaire
- TYYÇ

Course Information
- Course Information
- Weekly Course Content
- Resources
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

7. Week	Shocks Without Collision	Lecture	
8. Week	Midterm exam	Exam	
9. Week	Solar Wind And Planetary Magnetosphere Interactions (With Special Emphasis On Earth)	Lecture	
10. Week	Some basic applications and discussing of some related papers Planet Ionospheres	Lecture	
11. Week	Planet Ionospheres	Lecture	
12. Week	Plasma-Stallite interaction	Lecture	
13. Week	Magnetic Gathering in Planet Magnetosphere	Lecture	
14. Week	Magnetosphere Configuration, Magnetosphere Dynamics	Lecture	
15. Week	Aurora And Aurora Ionosphere, Magnetosphere Structure İn Star Systems	Lecture	
16. Week	Final exam	Exam	

RESOURCES

Recommended Sources
Space Physics Lecture Notes Lyu L. H. 2011
Introduction to Space Physics , Kivelson, M.G., Russell, C.T. , 1995
An Introduction to Plasmas and Particles in the Heliosphere and Magnetospheres, Kallenrode, May-Britt, 2004
Space Physics: An Introduction to Plasmas and Particles in the Heliosphere and Magnetospheres, Kallenrode, M.B., 1998.

ASSESSMENT

Measurement and Evaluation Methods and Techniques
Mid-term exam (40 percent) and final exam (60 percent).

COURSE CATEGORY

Course Category	Percentage
Core Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2
PY1	5	5	5
PY2	5	5	5
PY3	3	3	3
PY4	4	4	4
PY5	5	5	5
PY6	5	5	5
PY7	3	3	3
PY8	5	5	4
PY9	3	3	3
PY10	2	2	2
PY11	4	4	4
PY12	3	3	3
PY13	3	3	3

PY14	3	3	3
PY15	2	2	2

*DK = Course's Contrubution.

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

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ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Class Hours (14 weeks)	14	3	42
Final Exam Preparation	1	45	45
Mid Term Exam Preparation	1	43	43
Preliminary Study	14	3	42
Mid Term Exam 1	1	3	3
Final Exam	1	3	3
Further Study	14	1	14
		Total Workload	192
		Total Workload / 25.5 (s)	7.53
		ECTS Credit of the Course	8