Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Relativistic Astrophysics	FZ-6031		3 + 0	3.0	7.5

Prerequisites	None

Language of Instruction	Turkish
Course Level	Third Cycle
Course Type	Elective
Mode of delivery	Face to face
Course Coordinator	Assoc. Prof. Dr. İbrahim BULUT
Instructors	Assoc. Prof. Dr. İbrahim BULUT
Assistants	
Course Objectives	It is learned that the structures of the celestial bodies are occured at the end of the stellar evolution and their physical processes.
Course Content	
Course Learning Outcomes	1) To be able to examine observational evidence of relativistic object. 2) To be able to have knowledge about the general relativity at a basic level. 3) To be able to discuss astrophysics of interacting binary stars with compact components, galactic nuclei, quasars and gravitational waves.

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Stellar equilbrium and stability in general relativity	Lesson Application, Pratic	
2. Week	Rotating	Lesson Application, Pratic	
3. Week	White dwarfs	Lesson Application, Pratic	
4. Week	White dwarfs	Lesson Application, Pratic	
5. Week	Neutron stars and pulsars	Lesson Application, Pratic	
6. Week	Neutron stars and pulsars	Lesson Application,	

Quick Access

Physics (PhD)
- 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
- Assessment
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

		Pratic	
7. Week	Black holes and gravitational collapse	Lesson Application, Pratic	
8. Week	Black holes and gravitational collapse	Lesson Application, Pratic	
9. Week	Matter collection in blackholes and neutron stars	Lesson Application, Pratic	
10. Week	Acceleration disc	Lesson Application, Pratic	
11. Week	X-ray sources	Lesson Application, Pratic	
12. Week	X-ray sources	Lesson Application, Pratic	
13. Week	Black hole candidates	Lesson Application	
14. Week	Black hole candidates	Lesson Application, Pratic	
15. Week	Review of the Semester	Lesson Application	
16. Week	Final exam	Exam	

RESOURCES

Recommended Sources
Relativistic Astrophysics (Cambridge Contemporary Astrophysics) , Bernard J. T. Jones (Editor), Dragoljub Markovic (Editor)

ASSESSMENT

Measurement and Evaluation Methods and Techniques		
Practice, homework, midterm exam, final exam		
In-Term Studies	**Quantity**	**Percentage**
Mid Term Exam 1	1	40
Total	1	40
End-Term Studies	**Quantity**	**Percentage**
Final Exam	1	60
Total	1	60
Contribution Of In-Term Studies To Overall Grade		40
End-Term Studies		60
Total		100

COURSE CATEGORY

Course Category	Percentage
Area of?Specialization Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3
PY1	4	4	4	4
PY2	4	4	4	4
PY3	4	4	4	4

PY4	3	4	3	3
PY5	4	4	4	4
PY6	5	5	5	5
PY7	2	2	2	2
PY8	3	3	3	3
PY9	4	5	4	4
PY10	3	3	3	3
PY11	3	3	3	3
PY12	2	2	2	2
PY13	4	3	4	4
PY14	4	4	4	4
PY15	4	4	4	4

*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)
Final Exam	1	10	10
Mid Term Exam 1	1	3	3
Assignment 1	8	6	48
Class Hours (14 weeks)	16	3	48
Further Study	10	6	60
Final Exam Preparation	1	11	11
Mid Term Exam Preparation	1	11	11
		Total Workload	191
		Total Workload / 25.5 (s)	7.49
		ECTS Credit of the Course	7