

Tamkang University Academic Year 114, 1st Semester Course Syllabus

Course Title	EXPLORING THE UNIVERSE	Instructor	HSI-AN PAN
Course Class	TNUUB0E NATURAL SCIENCES, 0E	Details	◆ General Course ◆ Required ◆ One Semester ◆ 2 Credits
Relevance to SDGs	SDG4 Quality education		
D e p a r t m e n t a l A i m o f E d u c a t i o n			
By exploring natural laws and studying scientific methods, to let students understand the impact of science and technology on human life, and to cultivate in them the ability to think independently, and to discover, analyse and solve problems. Also, throu.			
Subject Schoolwide essential virtues			
1. A global perspective. (ratio:10.00) 2. Information literacy. (ratio:30.00) 3. A vision for the future. (ratio:10.00) 4. Moral integrity. (ratio:5.00) 5. Independent thinking. (ratio:30.00) 6. A cheerful attitude and healthy lifestyle. (ratio:5.00) 7. A spirit of teamwork and dedication. (ratio:5.00) 8. A sense of aesthetic appreciation. (ratio:5.00)			
Course Introduction	Astronomy is the oldest of the scientific subjects. This course will introduce the Universe we know today, including cosmology, galaxies, stars, solar system, and exoplanets. The course will also discuss how astronomers observe our Universe and those questions that you often ask: How large is the Universe? Why have we not met Aliens yet? What is the fate of Mother Earth? Why is the Nobel Prize often given to astronomers in recent years? In this course, we will discuss these questions and astronomical news in conceptual ways (with minimal equations).		

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

No.	Teaching Objectives	objective methods
1	Develop a broad knowledge in basic astronomy.	Cognitive
2	Collaborate and communicate with students with different expertise.	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1		12345678	Lecture, Discussion	Testing, Discussion(including classroom and online), Report(including oral and written), Activity Participation
2		12345678	Lecture, Discussion	Testing, Discussion(including classroom and online), Report(including oral and written), Activity Participation

Course Schedule

Week	Date	Course Contents	Note
1	114/09/15 ~ 114/09/21	Course Introduction	
2	114/09/22 ~ 114/09/28	Origin of the Universe / Nature of Light	
3	114/09/29 ~ 114/10/05	Origin of the Universe / Nature of Light	
4	114/10/06 ~ 114/10/12	What is the Universe Made Of: Planets and Exoplanets	
5	114/10/13 ~ 114/10/19	What is the Universe Made Of: Planets and Exoplanets	
6	114/10/20 ~ 114/10/26	What is the Universe Made Of: Stars	
7	114/10/27 ~ 114/11/02	What is the Universe Made Of: Galaxies, Galaxy Clusters, Dark Matter	

8	114/11/03 ~ 114/11/09	What is the Universe Made Of: Galaxies, Galaxy Clusters, Dark Matter	
9	114/11/10 ~ 114/11/16	Midterm Exam/Midterm Assessment Week (teachers can adjust the week as needed)	
10	114/11/17 ~ 114/11/23	What is the Universe Made Of: Galaxies, Galaxy Clusters, Dark Matter	
11	114/11/24 ~ 114/11/30	What is the Universe Made Of: Active Galaxies and Black Holes	
12	114/12/01 ~ 114/12/07	Telescopes	
13	114/12/08 ~ 114/12/14	Telescopes	
14	114/12/15 ~ 114/12/21	The Nobel Prize in Astronomy-related Discoveries	
15	114/12/22 ~ 114/12/28	The Nobel Prize in Astronomy-related Discoveries	
16	114/12/29 ~ 115/01/04	Lecture with discussion-based participation	
17	115/01/05 ~ 115/01/11	Lecture with discussion-based participation	
18	115/01/12 ~ 115/01/18	Lecture with discussion-based participation	
Key capabilities			
Interdisciplinary			
Distinctive teaching			
Course Content		Logical Thinking	
Requirement			
Textbooks and Teaching Materials		Self-made teaching materials:Presentations, Handouts Using teaching materials from other writers:Presentations, Handouts	

References	
Grading Policy	<p>◆ Attendance : % ◆ Mark of Usual : % ◆ Midterm Exam : 5.0 %</p> <p>◆ Final Exam : 5.0 %</p> <p>◆ Other 〈 tests, engagement 〉 : 90.0 %</p>
Note	<p>This syllabus may be uploaded at the website of Course Syllabus Management System at https://web2.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php.</p> <p>※"Adhere to the concept of intellectual property rights" and "Do not illegally photocopy, download, or distribute." Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>