

## Tamkang University Academic Year 114, 1st Semester Course Syllabus

Course Title	SEMINAR (I)	Instructor	HSIAO-TSU WANG
Course Class	TSPXM1A MASTER'S PROGRAM, DEPARTMENT OF PHYSICS, 1A	Details	◆ General Course ◆ Required ◆ 1st 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			
<p>I . Conveying professional knowledge: Teach the students to learn the core knowledge of physics, to obtain the basic skills needed for physics research, and to apply the professional knowledge to physics related technologies.</p> <p>II. Analyzing and solving problems: Guide the students to analyze problems, and to acquire the mathematical ability to quantify conceptual models and also the capability needed to think and to innovate in solving various scientific and engineering problems.</p> <p>III. Training for experimental techniques: Teach the students on how to carry out and to verify various experiments, and at the same time to have the mentality of working cautiously and the awareness in operating safely.</p> <p>IV. Expressing personal characteristics: Help the students to use their personal characteristics, like resolution, sincerity, and concentration, plus their professional skills to gain recognition among the executives and their peers.</p> <p>V . Cultivating team spirit: Train the students to have the organizational ability and the communicational skills to let them have the adaptability to integrate into a professional team, and to obtain the ability to bring out and to put to use the strength of the team to solve professional problems.</p> <p>VI. Building international views: Comply to the trends of globalization to build an international learning environment and opportunities in order to educate the students to continue in their self-advancements, to absorb new worldwide knowledge, and to become a professional with international views in their future perspective careers.</p>			
Subject Departmental core competences			
<p>A. To acquire the core basic knowledge in the field of physics.(ratio:10.00)</p> <p>B. To understand the overall features of specific fields of physics.(ratio:20.00)</p> <p>C. To obtain the mathematical ability to quantify concepts, models, and practical problems. (ratio:10.00)</p> <p>D. To cultivate the basic ability to discover, to analyze, and to solve problems.(ratio:20.00)</p> <p>E. To practice the actual handling of physics problems, and to have the ability to analyze and to interpret experimental data.(ratio:5.00)</p> <p>F. To have the mentality to work cautiously and the awareness to operate safely.(ratio:5.00)</p>			

<div>G. To comprehend the trend of technological development and to acquire the knowledge and skills of other fields needed in their professional career.(ratio:25.00)</div> <div>H. To have the spirit and capability in team cooperation.(ratio:5.00)</div>		
Subject Schoolwide essential virtues		
<div>1. A global perspective. (ratio:10.00)</div> <div>2. Information literacy. (ratio:20.00)</div> <div>3. A vision for the future. (ratio:20.00)</div> <div>4. Moral integrity. (ratio:5.00)</div> <div>5. Independent thinking. (ratio:20.00)</div> <div>6. A cheerful attitude and healthy lifestyle. (ratio:5.00)</div> <div>7. A spirit of teamwork and dedication. (ratio:10.00)</div> <div>8. A sense of aesthetic appreciation. (ratio:10.00)</div>		
Course Introduction	To enable students to gain a broad understanding of knowledge and cutting-edge research in physics, experts from various fields within our university and other institutions will be invited to present their research during lectures. Additionally, students will be required to present their own research and practice their presentation, communication, and conflict-handling skills within the lecture context.	
<div>The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.</div> <div>Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.</div> <div>I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.</div> <div>II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.</div> <div>III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.</div>		
No.	Teaching Objectives	objective methods

1	To learn the cutting-edge research in physics. To be able to digest professional information/knowledge within a relatively short time. To be able to present own research in a logical way. To gain presentation, communication, and conflict-handling skills.			Cognitive
The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment				
No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDEFGH	12345678	Lecture, Discussion	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	Introduction of the course/Laboratory Safety and Security		
2	114/09/22 ~ 114/09/28	Presentation on Research in Physics by Researcher or Students		
3	114/09/29 ~ 114/10/05	Presentation on Research in Physics by Researcher or Students		
4	114/10/06 ~ 114/10/12	Presentation on Research in Physics by Researcher or Students		
5	114/10/13 ~ 114/10/19	Presentation on Research in Physics by Researcher or Students		
6	114/10/20 ~ 114/10/26	Presentation on Research in Physics by Researcher or Students		
7	114/10/27 ~ 114/11/02	Presentation on Research in Physics by Researcher or Students		
8	114/11/03 ~ 114/11/09	Presentation on Research in Physics by Researcher or Students		
9	114/11/10 ~ 114/11/16	Midterm Exam		
10	114/11/17 ~ 114/11/23	Presentation on Research in Physics by Researcher or Students		
11	114/11/24 ~ 114/11/30	Presentation on Research in Physics by Researcher or Students		
12	114/12/01 ~ 114/12/07	Presentation on Research in Physics by Researcher or Students		

13	114/12/08 ~ 114/12/14	Presentation on Research in Physics by Researcher or Students	
14	114/12/15 ~ 114/12/21	Presentation on Research in Physics by Researcher or Students	
15	114/12/22 ~ 114/12/28	Presentation on Research in Physics by Researcher or Students	
16	114/12/29 ~ 115/01/04	Final Exam	
17	115/01/05 ~ 115/01/11	Flexible Assessment Week	
18	115/01/12 ~ 115/01/18	Flexible Teaching Week	
Key capabilities			
Interdisciplinary			
Distinctive teaching			
Course Content		Logical Thinking	
Requirement		Students should be an active and engaged participant by attending the lecture, asking questions, evaluating information presented in the talk, and presenting their own research.	
Textbooks and Teaching Materials		Using teaching materials from other writers:Presentations	
References			
Grading Policy		◆ Attendance : 50.0 % ◆ Mark of Usual : % ◆ Midterm Exam : % ◆ Final Exam : % ◆ Other 〈course engagement〉 : 50.0 %	

Note	<p>This syllabus may be uploaded at the website of Course Syllabus Management System at <a href="https://web2.ais.tku.edu.tw/csp">https://web2.ais.tku.edu.tw/csp</a> or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at <a href="http://www.acad.tku.edu.tw/CS/main.php">http://www.acad.tku.edu.tw/CS/main.php</a>.</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>
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