

Academic Year	1920	Semester	2
Course Coordinator	Dr Leek Meng Lee		
Course Code	PH4507		
Course Title	Topics in Physics I		
Pre-requisites	Division Approval (To be decided by faculties teaching the courses)		
No of AUs	3		
Contact Hours	39		
Proposal Date	7 th Aug 2019		

Course Aims

This course aims to expose you to the latest research topics in theoretical physics. Faculty who are involved in the theoretical physics research will lead this course to provide you with opportunities to learn about their research and perhaps to join their research groups. For those of you who already have the pre-requisite knowledge, you may even start on the research during the course. Through this course, you will become up-to-date in your knowledge and skills in theoretical physics.

Intended Learning Outcomes (ILO)

By the end of this course, you (as a student) would be able to:

1. Discuss cutting-edge theories and research papers in fundamental theoretical physics.
2. Analyze problems in physics using advanced theoretical and mathematical skills and techniques
3. Conduct research on the latest topics in theoretical physics.

Course Content

Due to the nature of the courses, the course content will be decided by the faculties teaching the courses.

Assessment (includes both continuous and summative assessment)

Component	Course LO Tested	Related Programme LO or Graduate Attributes	Weighting	Team/Individual	Assessment Rubrics
1. Final Examination	-		60%	Individual	Appendix 2
2. Continuous Assessment (CA): Assignment	-		40%	To be decided by the faculty teaching	Appendix 1
Total			100%		

Formative feedback

To be decided by the faculty teaching. For example: the CAs comprise of written tests for the instructor to assess the students' understanding and ability to apply theoretical knowledge. The students will receive detailed feedback after each assessment.

You will receive feedback throughout the course. In particular, you will receive feedback after each assessment.

Learning and Teaching approach

To be decided by the faculty teaching.

Reading and References

To be decided by the faculty teaching.

Course Policies and Student Responsibilities

*Suggested fields for this portions include **general policies with regards to students' assignment, punctuality absenteeism, etc.***

Example for a course using Team-based Learning:

(1) General

You are expected to complete all assigned pre-class readings and activities, attend all classes punctually and take all scheduled assignments and tests by due dates. You are expected to take responsibility to follow up with course notes, assignments and course related announcements for seminar sessions they have missed. You are expected to participate in all class discussions and activities.

(2) Absenteeism

In-class activities make up a significant portion of your learning experience. Absence from class without a valid reason may affect your overall course performance. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies. There will be no make-up opportunities for in-class activities.

If you miss a class session, you must inform me via email (include email address) prior to the start of the class.

For another example, please refer to <http://www.ntu.edu.sg/tlpd/ta/Pages/Policy.aspx>

Academic Integrity

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip

yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the [academic integrity website](#) for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

Course Instructors

To be decided by the division.

Planned Weekly Schedule

To be decided by the faculty teaching.

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Appendix 1: Assessment Criteria for Continuous Assessment

By mark range

Marks	Criteria
> 90%	Demonstrates very deep understanding of the structure of theoretical physics and has the ability to apply and work with advanced analytical techniques to perform calculations and interpret theories.
75% to 89%	Demonstrates deep understanding of the structure of theoretical physics and has the ability to apply and work with advanced analytical techniques to perform calculations and interpret theories.
65% to 74%	Demonstrates reasonable understanding of the structure of theoretical physics and, with assistance, has the ability to apply and work with advanced analytical techniques to perform calculations and interpret theories.
50% to 64%	Demonstrates shallow understanding of the structure of theoretical physics and has difficulty applying and working with advanced analytical techniques to perform calculations and interpret theories.
< 50%	Shows no understanding of the structure of theoretical physics and unable to apply and work with advanced analytical techniques to perform calculations and interpret theories.

Appendix 2: Assessment Criteria for Final Examination

By mark range

Marks	Criteria
> 90%	Demonstrates very deep understanding of the structure of theoretical physics and has the ability to apply and work with advanced analytical techniques to perform calculations and interpret theories.
75% to 89%	Demonstrates deep understanding of the structure of theoretical physics and has the ability to apply and work with advanced analytical techniques to perform calculations and interpret theories.
65% to 74%	Demonstrates reasonable understanding of the structure of theoretical physics and, with assistance, has the ability to apply and work with advanced analytical techniques to perform calculations and interpret theories.
50% to 64%	Demonstrates shallow understanding of the structure of theoretical physics and has difficulty applying and working with advanced analytical techniques to perform calculations and interpret theories.
< 50%	Shows no understanding of the structure of theoretical physics and unable to apply and work with advanced analytical techniques to perform calculations and interpret theories.