Syllabus

Introductory Quantum Mechanics

1) **Course overview**:

The quantum theory which has been introduced by Copenhagen group in 1930. Nowadays, the knowledge of the quantum mechanics is the fundamental basics for the advanced technology used in the small electronic devices like Iphone, in the nuclear power reactor, in the technology in the future like quantum computer for example.

2) **Course goal**:

The objective of this course is to introduce undergraduate students (School of Engineering) to the set of mathematical tools needed to formulate problems in quantum mechanics, to understand the basics ideas of quantum mechanics and its applications in the advanced technology.

2) **Lecturer**:

Dr. Tran Viet Nhan Hao
Email: hao.tran@ttu.edu.vn Office: 300A, 3rd floor of admin building
Schedule: Mon, Tue, Thu: 8:00 & 13:30
Office hours: Mon. (9:00 – 11:00 & 14:00 – 15:00), Wed. (9:00 – 11:00), and Thur. (9:00 – 11:00 & 14:00 – 15:00)

3) **Lecture hall**: 108 of Admin building

4) **Credits**: The course takes 3 credits including theories, problem solving, homework assignments.

5) **Course textbooks**:

Required:

- C. Cohen-Tanoudji, B. Diu, and F. Laloe, Quantum Mechanics, Wiley, 1977.

- A. Messiah, Quantum Mechanics, North-Holland, 1961.
- Fundamental Quantum Mechanics for Engineers, Leon van Dommelen, Version 3.1 Beta 3 (textbook).

6) **Course home page**:

http://course.ttu.edu.vn/moodle/ → Introductory Quantum Mechanics

7) **Teaching method:**

Theoretical lectures, quizzes, problem solving, group discussions and/or seminars, homework assignments.

8) **Course Schedule:**

Week	Topics	Reading	Activities
1	Course Overview Mathematical Prerequisites	p1-p14	+ Introduction + Quizzes + Homework
2	Basic Ideas of Quantum Mechanics	p15-p52	+ Lecture + Quizzes + Solutions
3	Single particle systems	P55-p95	+ Lecture + Quizzes + Homework
4	**Final Exam**		

9) **Grading procedures**:

+ Attendance: 20%
+ Final exam: 50%
+ Homework: 30%
+ Grading:

Letter Grade	Decimal Grade	Percentage (%)
A+	4.0	97 – 100

A	4.0	93 – 96
A-	3.7	90 – 92
B+	3.3	83 – 86
B	3.0	80 – 82
C+	2.3	77 - 79
C	2.0	73 - 76
C-	1.7	70 – 72
D	1.3	67 – 69
D	1.0	65 – 66
F	0.0	Below 65

10) **Class regulations**:

- All lectures are in English. Speaking Vietnamese during class is prohibited.
- Latecomers of 10 minutes and higher are considered to be absence.
- Students are encouraged to ask questions. If students have questions, do not hesitate to ask. Do not need to wait until the instructor is finished speaking.
- No talking while someone else is talking.
- No eating and/or drinking in the classroom.
- All mobile phones must be set to the “Silent Mode”.
- Students can meet instructors during their office hours.
- Lie and/or cheating in an examination are not acceptable. Students who get involved will be dropped out of this course.