Course Syllabus

1.	**Program of Study**	Bachelor of Science Program Bachelor of Arts Program Bachelor of Business Administration Program Bachelor of Nursing Science Program
	Faculty/Institute/College	Mahidol University International College
2.	**Course Code**	ICNS 132
	Course Title	Principles of Physics
3.	**Number of Credits**	4 (Lectures/Lab/Self-Study) (4-0-8)
4.	**Prerequisite *(s)***	none
5.	**Type of Course**	General Education Course
6.	**Session**	2nd and 3rd trimesters

7. Conditions

8. Course Description

Measurement, units and dimensions; vectors; description of motion; Newton's Laws of Motion; work kinetic energy, potential energy, conservation of energy; linear momentum and it's Law of the Conservation; equilibrium and elasticity; periodic motion; one dimensional wave motion; sound and hearing; hydrostatics; heat and thermal properties of mater; electricity and magnetism; geometrical optics; nuclear physics.

9. Course Objective *(s)*

After successful completion of this course, students should be able to

9.1 to provide students and describing of the fundamental principles of physics and its applications with emphasis on mechanics, waves and fluid mechanics.

9.2 students should be able to solve basic problems using fundamental equations developed in the areas listed above.

9.3 students should be able to apply fundamental principles of these fields of study to new situations.

10. Course Outline

Week	Topic	Hour			Instructor
		Lecture	Lab	Self-Study	
1	Introduction and vectors	4	0	8	Veerachai
2 & 3	Motion in one and two dimensions, Newton's law of motion	8	0	16	
4	Work and energy	4	0	8	
5	- Momentum, impulse and collisions - Midterm exam	4	0	8	
6	Rotational motion	4	0	8	
7	Equilibrium of rigid body	4	0	8	
8 & 9	Oscillatory motion and waves	8	0	16	
10 & 11	Fluid mechanics	8	0	16	
	Total	44	0	88	
Final Examination					

11. Teaching Method *(s)*

11.1 Lecture

11.2 Classroom discussion

12. Teaching Media

11.1 Transparencies

11.2 Handouts

13. Measurement and evaluation of student achievement

Student achievement is measured and evaluated by

13.1 the ability to to provide students and describing of the fundamental principles of physics and its applications with emphasis on mechanics, waves and fluid mechanics.

13.2 students should be able to solve basic problems using fundamental equations developed in the areas listed above.

13.3 students should be able to apply fundamental principles of these fields of study to new situations.

Student's achievement will be graded according to the faculty and university standard using the symbols: A, B+, B, C+,C,D+, D, and F.

Students must have attended at least 80% of the total class hours of this course.

MUIC standard grading criteria: 90% and above is grade A
Ratio of mark

Component	%
Attendance and quiz	10
Assignments	10
Midterm exam	35
Final exam	45
Total	100

Final letter grades will be assigned on a curve

14. Course evaluation

14.1 Students' achievement as indicated in number 13 above.

14.2 Students' satisfaction toward teaching and learning of the course using questionnaires.

15. Reference *(s)*

R. A. Serway and J. W. Jewett, Jr., ***Principles of Physics***, Thomson, 2002.D.
Halliday R. Resnick and J. Walker, ***Fundamental of Physics***, John Wiley & Sons, 2001.

16. Instructor *(s)*

16.1 Assistant Professor Veerachai Siripunvaraporn

17. Course Coordinator

Assistant Professor Srisuda Varamit