Syllabus

Course Title: Physics II
Course Code: 02-10
Product Code: A1

First Creation (Date - Version No.) : 080111-01
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Revision History (Date - Version No.)			
1	080119-02	16	
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Final Version (Date - Version No.) :

Official Approval	Date of Report to PIU

Course Title, Class	Term	Day of the week, Period	Credit	Instructor
Physics II	2nd		4	Assoc. Prof. Dr. Do Ngoc Uan

Course Description
It's the second part of General Physics for Undergraduates training on Industrial, Technological Branches. In Physics II students study the Electricity, Magnetism, Electromagnetic oscillation and wave, and Wave Optics.

Focus and Goal
For Students to receive Bachelor of Ritsumeikan University (Japan) and HUT Diploma.

Courses which students are recommended to enroll in, but not required to
Mathematics, Philosophy

Schedule	
1st	**Theme I:** Electrostatics (Part 1)
	Keywords: Charged, Charges, Force, Coulomb, Electrostatic field, Field Intensity, Vector, Integral, Dipole, Line Charge, Disk Charge.
2nd	**Theme II:** Electrostatics (Part 2)
	Flux, Otstrograxki-Gauss, Partial differential, div, Stokes' Theorem, Poisson, Sphere charge, Planar surface charge, Cylinder surface Charge.
3rd	**Theme III** Electrostatics (Part 3)
	Work, Energy, Potential, Eqipotential surface, Div, Grad, Dipole.
4th	**Theme IV**: Conductor, Current and Insulators (Part 1)
	Keywords: Charged Conductor, Electrostatic Equilibrium, Spearhead, Induction, Capacity, Capacitor,
5th	**Theme V**: Conductor, Current and Insulators (Part 2)
	Keywords: Energy of Electric field, Ohm, Current Density vector, Power
6th	**Theme VI**: Conductor, Current and Insulators (Part 3)
	Polarization, Molecular polarizability, Dielectric Suscepbility, Dielectric constant, Ferroelectric materials.
7th	**Theme VII:** Magnetic field (Part 1)
	Keywords: Magnetic Interaction, Ampere, Biot-Savart, Magnetic field, Inductance, Intensity,
8th	**Theme VIII:** Magnetic field (Part 2)
	Linear current, Circle current, Moving charge, Flux, Otstrogratxki-Gauss, Ampere, Force, Work, Lorenz.
9th	**Theme IX:** Inductance, Self-Inductance
	Keywords: Faraday, Lenz, Vertiginous current, Surface effect, Generator, Magnetic Energy density.
10th	**Theme X:** Magnetic Materials
	Keywords: Magnetic moment, Magnetization, Diamagnetism, Paramagnetism, Ferromagnetism, Domain.
11th	**Theme XI:** Electromagnetic field, Oscillation, Wave (Part 1)
	Keywords: Maxwell's Laws and Equations, rot, Integral Differential Forms, Displacement current.
12th	**Theme XII:** Electromagnetic field, Oscillation, Wave (Part 2)
	LC, undriven LRC, driven LRC circuit, Intensity, Poynting vector, Pressure, Spectrum.
13th	**Theme XIII:** Wave Optic, Interference of Light.
	Keywords: Coherence, Young double-Slits, Intensity, Interference Pattern, Lloyd, Reyleigh, Michelson interferometer.

14th	**Theme XIV:** Diffraction and Polarization
	Keywords: Diffraction Pattern, Distribution, Fresnel, Gratings, Crystals, X-ray, Mallus, Tuamalin, and Sacarometer.

Out of class assignment
Students: Correction, recalculation of own notes with text books and solving Problems Tutorials and assistance: Office hours.

Grading Criteria and Method of Evaluation		
Kind	Percentage	Evaluation Criteria
Examination	70%	Scalar 0-10
Report	30%	Scalar 0-10
Continuous Assessment		Failed: <4; Weak Passed: 4 to <5; Normal: 5 to <6, Relative Good: 6 to <7; Good: 7 to <8; Very good : 8 to <9; Excellent: 9 to10;
Others		
Note		

Educational advice for enrolled students
Students to receive JTC or HUT Diploma to have 8 Credits for Physics I and Physics II.

Textbooks				
Title	Author	Publisher	ISBN code	Comment
Training Books on general Physics: 3 Toms Theory and Problems.	Luong Duyen Binh and other	Education Hanoi 1978-2005		In Vietnamese Main Educational materials
General Physics: Principles and Application.	Tran Ngoc Hoi and Pham Van Thieu	Education Hanoi 2006		In Vietnamese Reference
Note				

Reference books				
Title	Author	Publisher	ISBN code	Comment
Physics For Scientists and Engineers	P. M. Fishbane and other	Prentice Hall		Reference
Physics Classical and modern	Frederick J. Keller, W. Edward Gettys Malcolm J. Skove	McGraw-Hill, Inc.		Reference
Note				

Internet Websites related to the Course
Construction later in HUT Websites. http://ocw.mit.edu/OcwWeb/Physics/; http://Virclass.com; http://nsdl.exploratorium.edu/

Contact

Assoc. Prof. Dr. Do Ngoc Uan
Hanoi University of Technology
Institute of Engineering Physics
Department Electronic Materials
Phone: 0903223681
E-mail: uan@mail.hut.edu.vn

Others