

Academic Year 2001/02
PHYSICS FOR ENGINEERING
MODULE PS128

B. Eng. in Electronic Engineering
B. Eng. in Telecom. Engineering
European B. Eng. in Electronic Systems
CECE1 (Common Entry Engineering)
B. Eng. in Mechatronics + other
mechanical (Semester 2 only)

PS 128 is a linked module (over the two semesters)

*Semester 1: **Mechanics and Heat***
(12 weeks between today and Xmas)

*Semester 2: **Waves and Optics***
(12 weeks between 04th February and May)

Lecturer,
Jean-Paul Mosnier,

School of Physical Sciences

Lectures, tutorials,
Labs (Dr Jim Conway) .

Ph: 700 5303 (voice mail)

email: jean-paul.mosnier@dcu.ie

web site: <http://www.physics.dcu.ie/jpm>

PS128 Timetable 2001/02
Semester 1

(1) Lectures

EE1/TC1/ES1/CECE1

MON 15.00 - 16.00 QG22

FRI 14.00 - 15.00 XG20

(2) Tutorials

THU 14.00-15.00 X235

THU 15.00-16.00 C166

(3) Labs

WED 09.00 - 12.00 NG22 (Physics
building)

Introduction

PHYSICS MODULE PS 128 **Physics for Engineering**

- Reference textbook: **University Physics** by Young and Freedman, 10th edition, about £37.
Contains: **PS 128** + basic electricity, magnetism, AC circuits, etc... recommended to purchase this book.

- Objectives of the Course (sem. 1):

1) Introduce the fundamentals of (newtonian) mechanics: Young's chapters 1 to 11.
Linear motion (kinematics), Newton's Laws, Work, Energy and conservation Laws, Momentum and Impulse, Rotational motion, Equilibrium and elasticity

2) Introduce the Fundamentals of Thermodynamics: Young's chap. 15 and 16.
Temperature and heat, thermal properties of matter.

Introduction

METHOD OF TEACHING

1) **Lectures:**

- I will use transparencies.
- The notes taken from the overheads are incomplete.
- You must try to take down notes from the oral explanations + make your own set of notes from the reading of Young's book.

2) **Tutorials:**

- Extremely important -mostly problem solving sessions.
- It's where you learn "how it works"

3) **Practicals (labs)**

- Sessions in physics labs.
- Provides another opportunity to understand the basic principles by applying them in a real physical situation.

ASSESSMENT (99/00 format)

- End-of-year exam (closed-book) 60% +
- labs 20% +
- mid-sessional 20% (just before Xmas break)

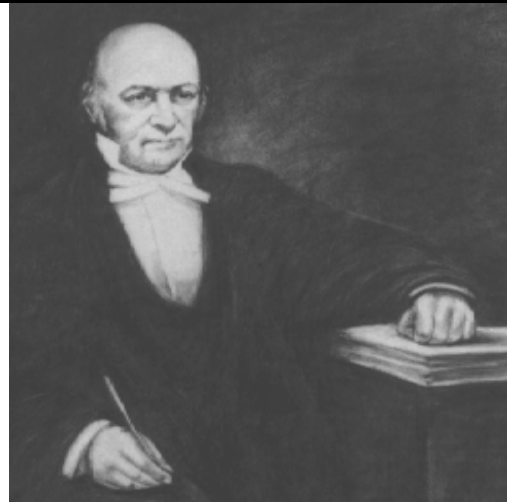
Lectures Notes + other information available from:

<http://olga.physics.dcu.ie/~jpm>

Site currently being modified!



Isaac NEWTON (Cambridge)
17th century



Rowan HAMILTON
(Trinity College, Dublin)
19th century

Introduction



JP MOSNIER, Dublin City University
21st century

PHYSICS
IS
FUN!