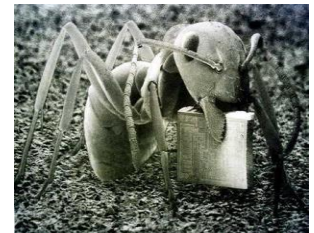




Open Day 2011/2012

- Physics answers the big questions
 - Energy generation and distribution
 - Global warming
 - Environmental monitoring/protection
 - Health (Diagnostics and Therapeutics)
 - Quantum/optical computing
 - Nanoscience/nanotechnology

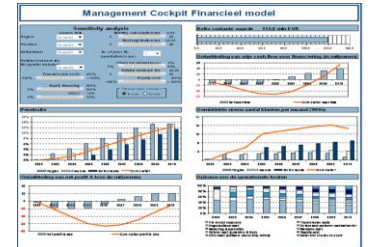
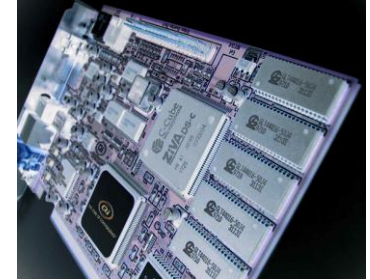


Why does one element in the periodic table underpin the technological developments in the information age?

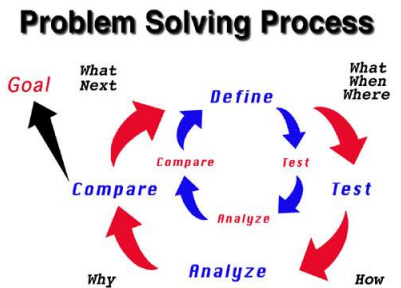
Most traditional manufacturing processes use materials because of their intrinsic properties.

Scientists learned how to control the properties of silicon!

- Physicists provide leadership in:
 - Basic research
 - Commercial R&D
 - Education and Training
 - Finance/Market Prediction and Modelling
 - Industry, Business, Public Service
 - Engineering, Design, Innovation



- A physics degree provides a broad education
- Applicable to a wide variety of jobs
 - IT Literate
 - Problem Solving
 - Mathematical Modelling
 - Ability to think ‘outside the box’



It offers a challenging and rewarding career focused on the creation of new knowledge

It requires the best and the brightest academic minds.

A scientific research career is an international passport.

- DCU campus environment
- Excellent IT and Library Facilities



- Great sports facilities including a 25 m pool



- Modern, well-equipped student centre: The Hub
- State-of-the-art performance centre: HELIX



- Purpose-built physics building
- Major investment in undergraduate laboratories



- Academic staff from Ireland, UK, Germany, France, Netherlands, Russia, US and Australia
- High research publication rate per staff member.



- Senior staff participate in research centres

BDI, NCPST, PRECISION



- Two National Research Centres founded by School Professors

NCPST, NCSR



- International collaborations, for example:

- CERN
- DESY FEL
- ITER
- SOLEIL
- DIAMOND
- ASTRID



- School is actively involved in Physics Education Research
- Physics staff have won President's Teaching and Research Awards
- Every First Year has a personal academic tutor



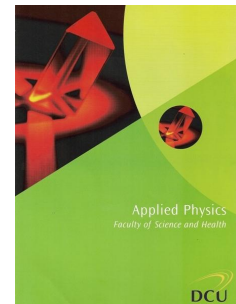
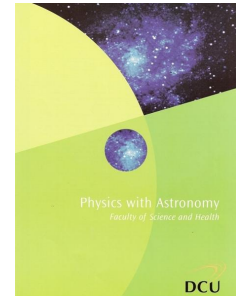
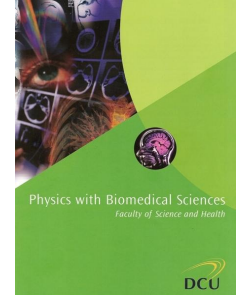
- Two Physics computing labs (Windows and UNIX)
- Continuous programme of facility upgrading
- School IT Manager



- Dedicated Technical Staff
- Support Undergraduate Laboratories at all levels



- Physics with Biomedical Sciences
(DC173)
- Physics with Astronomy
(DC167)
- Applied Physics
(DC171)



Year 1	Mechanics, Optics, Thermal Physics, Electricity and Magnetism, Chemistry, Computing, Labs and Projects
Year 2	Quantum Mechanics, Modern Optics, Electronics, Mathematics, Labs and Projects
Year 3	Wave Optics, Relativity, Quantum Mechanics, Statistical Mechanics
Year 4	Choice of Optional Topics, Final Year Project

Physics is of vital importance to the
Biomedical fields

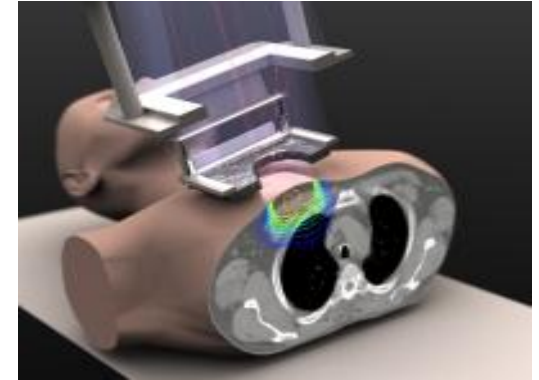
NMR / PET / CAT Scanners

Imaging Technology

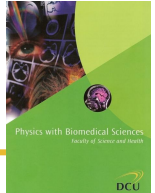
Radiation Therapy / Nuclear Medicine

Diagnostic Devices

Laser Treatment



Includes;



Year 1

Chemistry, Physiology

Year 2

Biology/ Biochemistry, Anatomy, Biomechanics

Year 3

Immunology

Year 4

Advanced Biomaterials and Processing, Laser Physics and applications, Project work in biomedical field

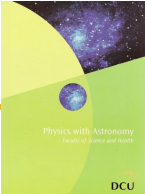


Physics is at the core of modern astronomy, both in terms of experimental apparatus, theory, and analysis of data

Imaging Technology
Data Acquisition
Computational Physics
Cosmology and Relativity

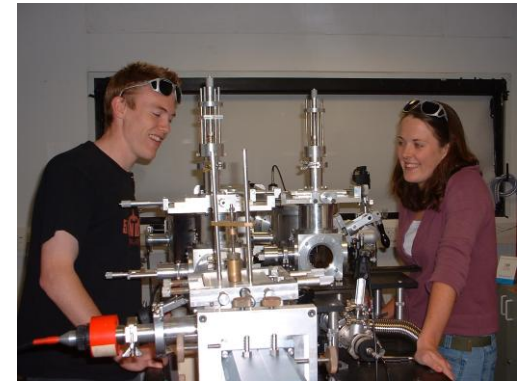
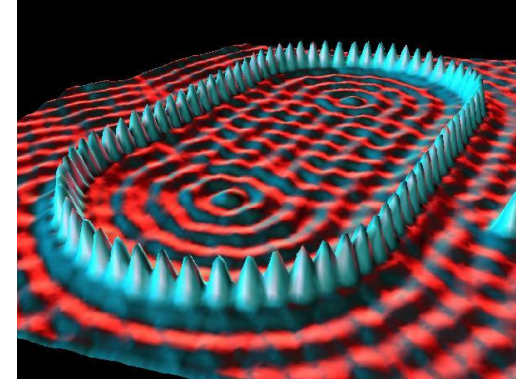
Includes:

Year 1	The Universe, Programming
Year 2	Advanced Programming, Relativity, Nuclear and Particle Physics, Optical Techniques, Space Science and Technology
Year 3	Galactic Astronomy, Stellar Physics
Year 4	General Relativity, Applied Spectroscopy, Digital Signal Processing, High Energy Astrophysics



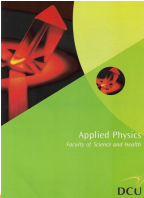
General physics degree aimed at industrial R&D and fundamental and applied research

Semiconductor Physics
Digital Signal Processing
Optics and Photonics
Computer Modelling
Instrumentation / Measurement



Includes:

Year 1	The Universe, Programming
Year 2	Advanced Programming, Solid State Physics, Electronics
Year 3	Semiconductor Physics, Wave Optics
Year 4	Quantum Electronics, Electrodynamics, Materials Growth and Characterisation, Solid State Physics, Photonics, Digital Signal Processing



Applied Physics

Six month INTRA placement

Physics with Biomedical Sciences

Six month INTRA placement (in hospital / biomedical industry)

Physics with Astronomy

Field trip to foreign observatory

Six month INTRA placement

- Lab Placement in School or Research Centre
- Opportunities to extend research placement via SFI UREKA
- Scholarship opportunities to spend a term in the US

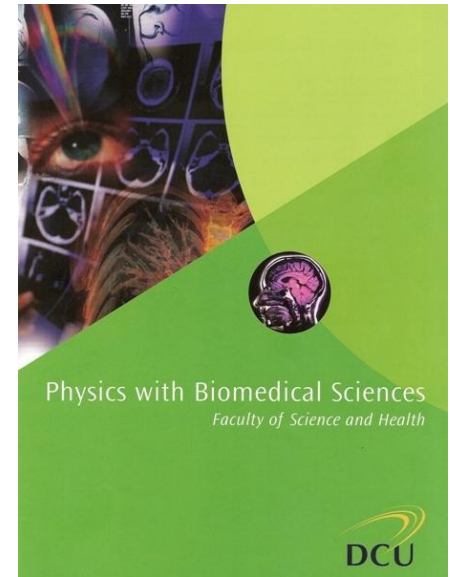
Physics with Biomedical Sciences

HD3 or OB3 in Mathematics

HC3 in a Science subject

Points:

420 (cut off) - 2011



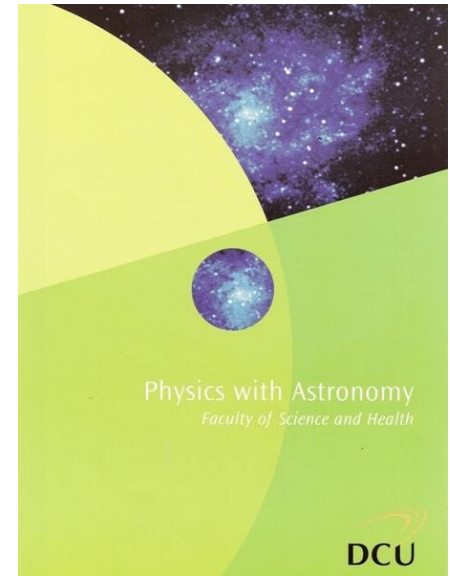
Physics with Astronomy

HD3 or OC3 in Mathematics

HD3 or OC3 in a Laboratory Science

Points:

370 (cut off) -2011



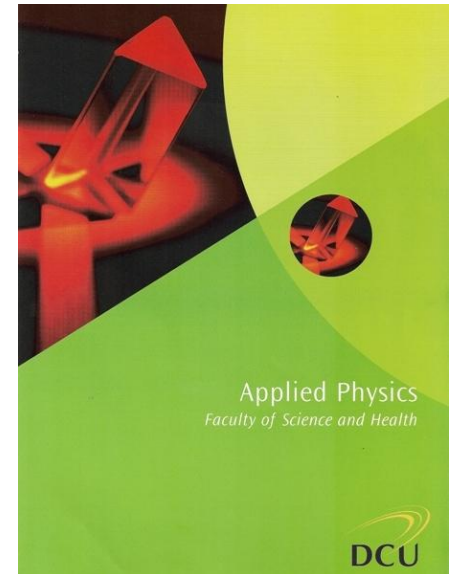
Applied Physics

HD3 or OC3 in Mathematics

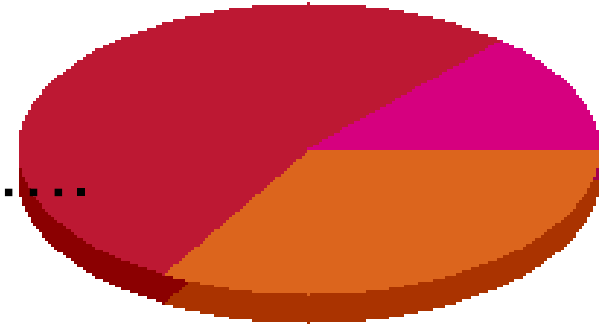
HD3 or OC3 in a Laboratory Science

Points:

360 (cut off) -2011



Intel, Meteor,
O₂, Eircom, AIB Group,
Hibernian Group, FORFÁS,
SFI, HP, Alcatel, RCSI, DIT,
St. James's/Mater/Tallaght
Hospitals, Google, First Derivative.....



DCU has responded to the need for a new generation of science teachers by preparing a new integrated curriculum including:

Science
Mathematics
Education
Information Technology



**You have the option of entering the
Physics programmes after a common
first year on Common Entry into Science
(DC201) – Cutoff points 400 - (2011)**

- Computing? Computer Hardware?
- Internet? Mobile Communications?
- Finance? Science Teaching?
- Medical Physics? Research Scientist?

Physics graduates from DCU have followed
all these career paths.

At DCU we have the

People

Facilities

Opportunities

