

Taller
Resultados del Aprendizaje y Créditos ECTS

Los resultados del aprendizaje para cada asignatura

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Universidad de Cantabria



Dos universidades inglesas:

- Universidad de Bath
- Universidad de Oxford



J.M. Bayod - Santander, noviembre 2007

PH10051: Electricity & magnetism (1)

Credits: 6 Level: Certificate Semester: 2

Assessment: EX85%, PR15%

Requisites: Before taking this unit you must take PH10007 or equivalent.

Aims: The aims of this unit are to introduce the fundamental laws of electricity and magnetism and to develop techniques used in the solution of simple field problems, both vector and scalar.

Learning Outcomes: After taking this unit the student should be able to:

- * state the basic laws of electricity and magnetism;
- * define scalar and vector fields and represent them graphically;
- * determine the forces due to electric and magnetic fields acting on charges and currents;
- * determine electric fields, potentials and energies due to simple, static charge distributions;
- * determine magnetic fields and energies due to simple, steady current distributions;
- * determine electric fields, e.m.f.s and induced currents due to varying magnetic fields;
- * demonstrate the correct use of common laboratory equipment, maintain a scientific logbook, perform basic error analysis and produce a scientific report.



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PH10051: Electricity & magnetism (2)

Skills: Written Communication T/F A, Numeracy T/F A, Data Acquisition, Handling, and Analysis T/F A, Information Technology T/F A, Problem Solving T/F A, Working as part of a group T/F, Practical laboratory skills T/F A.

Content:

Introduction to scalar and vector fields (1 hour).

Electrostatics (9 hours): Electric charge, Coulomb's Law, superposition of forces, electric charge distribution, the electric field, electric flux, Gauss's Law, examples of field distributions, electric dipoles. Line integral of the electric field, potential difference, calculation of fields from potentials, examples of potential distributions, energy associated with electric field. Electric field around conductors, capacitors and their capacitance, energy stored.

Magnetism (7 hours): Lorentz force law, force on a current-carrying wire, force between current-carrying wires, torque on a current loop, magnetic dipoles. Biot-Savart Law, Ampere's Law, magnetic flux, Gauss's Law in magnetism, examples of field distributions.

Electromagnetic induction (5 hours): Induced e.m.f. and examples, Faraday's Law, Lenz's Law, energy stored in a magnetic field, self and mutual inductance, energy stored in an inductor.

Laboratory:

Performance of experiments designed to develop practical skills and support lecture material.



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Claves de las formas de evaluar

- CW: Coursework
- DS: Dissertation
- ES: Assessed essay
- EX: Written examination
- OR: Oral examination
- OT: Other
- PR: Practical or laboratory classes/reports/work
- RT: Report



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Year 1 Level 1 Units (T/F – Taught and/or Facilitated, A – Assessed)												
Key Skill	ME1001	ME1002	ME1003	ME1004	ME1005	ME1006	ME1007	XX10118	ME1009	ME1010	ME1012	EE10077
Written Communication	Basic T/FA				Basic F/A	Basic F/A						
Oral Communication	Basic T/FA											
Numeracy		Basic T/FA	Basic T/FA	Basic T/FA				Basic T/FA	Basic T/FA	Basic T/FA		Basic T/FA
Data Acquisition, Handling and Analysis	Basic T/FA						Basic T/FA					
Information Technology								Basic T/FA				Basic T/FA
Problem Solving			Basic T/FA	Basic T/FA	Basic T/FA				Basic T/FA	Basic T/FA	Basic T/FA	
Working Independently	Basic T/FA		Basic T/FA	Basic T/FA	Basic T/FA		Basic T/FA	Basic T/FA	Basic T/FA	Basic T/FA	Basic T/FA	Basic T/FA
Working as part of a group	Basic T/FA					Basic T/FA	Basic T/FA				Basic T/FA	
Leadership						Basic T/FA					Basic T/FA	

ME1001 – Experimental and Engineering Skills 1
 ME1004 – Solid Mechanics 1
 ME1007 – Experimental and Engineering Skills 2
 ME1010 – Solid Mechanics 2

ME1002 – Mathematics 1
 ME1005 – Applied Engineering
 XX10118 – Mathematics 2
 ME1012 – Design Materials and Manufacture 2

ME1003 – Thermofluids 1
 ME1006 – Design Materials and Manufacture 1
 ME1009 – Thermofluids 2
 EE10077 – Electronics and Electrical Drives

MAPPING KEY SKILLS – YEAR 1

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De Outcomes from institutional audit

'The successful implementation of radical governance reforms to create a coherent structure for the management and provision of teaching across the collegiate University' (exemplified by the **'very good linkage between the learning outcomes, the curriculum, the teaching/learning strategies and the assessment'** in new programmes in experimental psychology).

MSc in Psychological Research (by coursework)



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Resultados del Aprendizaje (1)

By the end of your course, **you should be able to:**

- use a range of psychological methods in an appropriate manner
- choose suitable methods for investigating particular research problems
- critically evaluate the selection and deployment of research procedures by other investigators
- design research studies with due awareness of confounds and the need to generate analysable data
- apply appropriate statistical methods to psychological data



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Resultados del Aprendizaje (2)

- identify an interesting and significant research problem, choose and apply an appropriate research technique, analyse the resulting data, and report the study in a dissertation
- proceed to a doctoral research programme
- work co-operatively with other students to develop your knowledge in a mixed programme of lectures, seminars and research supervision
- contribute to the body of knowledge associated with the discipline of psychology



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Estrategias de enseñanza-aprendizaje

Theory and Methods in Psychological Research (Part 1)

The first part of this module consists of **a series of 8 lectures** given by Oxford Brookes University Staff, and **a series of discussion sessions** led by Dr Lee Rowland. There will also be **a day of oral presentations** by all students on the course in week 8.

Project Design (Part 1)

This first part of this module consists of **a series of presentations by academic staff** of the Department of Experimental Psychology, who will describe some of their own research and lead discussions on methodological and theoretical issues.

Statistical Theory and Methods (Part 1)

This module consists of **a series of 8 Statistical Lectures** given by staff from the Department of Politics and International Relations, Oxford University, and **6 Statistical Workshops** with Dr David Popplewell, Department of Experimental Psychology. **Reports based on workshop assignments** should be submitted by the end of week 8.



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Asignatura *Theory and Methods in Psychological Research (Res.Apr.1)*

After successfully completing this module, students will be able to demonstrate that they can:

Knowledge and Understanding

- Read research papers and understand their methodologies while being able to evaluate their advantages and limitations
- Critically analyse a research paper with respect to content and methods, assessing the internal and external validity and appropriateness of analyses and conclusions
- Understand the relationship between theories and research and to design research taking these into account
- Describe current controversies in the philosophy of science
- Critically evaluate the content and methodology of research studies in psychology
- Select appropriate research methods



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Asignatura *Theory and Methods in Psychological Research* (Res.Apr.2)

Disciplinary/professional skills

- Discuss ethical issues in a diversity of research situations
- Explain why the philosophy of science is relevant to researchers in psychology
- Critically discuss the nature and limitations of scientific explanation
- Discuss standard data collection techniques

Transferable Skills

- Work in teams
- Communicate to a variety of audiences using a range of media
- Effectively solve problems
- Use computer packages



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Asignatura *Theory and Methods in Psychological Research* (Evaluación)

●Assessment

3,000 word essay. By Noon – Friday 22nd June 2008

●Oral presentation requirement

You are required to give a 15-minute oral presentation (using PowerPoint) to a satisfactory standard based on material from this module as part of a day-long session on Thursday, November 29.

The audience will consist of all other students on the course as well as the MSc Course Director and Assistant Course Director. There will be five minutes for questions following each presentation. Students will also need to provide an electronic copy of their power-point presentation to MSc Course Administrator for our records.

Students will receive verbal feedback about their presentation. In order to collect information for this feedback, all students are expected to fill in a brief evaluation form for each of the talks providing a sentence saying what they think was good about the presentation and another sentence on how they think it might have been improved.



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Evaluación (1)

General Principles of Assessment

The MSc in Psychological Research is assessed entirely on the basis of coursework, and you will not sit any written examinations. In the event that the examiners are uncertain about what final award is appropriate, individual oral examinations may be arranged for individual candidates.

The essential skills, which we outlined in the section on Aims and Objectives, can be thought of as targets, and we will assess to see whether you have been able to reach these targets throughout the course (See the **Marking Criteria for Coursework**, Statistical Portfolio and Thesis on pages 42-44, below).

As you will have seen the assignments are spread over the year (see Calendar of Assessment on page 13) this is so that we can provide you with continuous feedback and avoid overloading you at particular points in time. They are also designed to allow you time to display the specific skills that are being assessed in each of the component courses.

You will also be given feedback on your performance for each module as soon as the External Examiner has approved the provisional joint agreed marks given by the assessors of each module. This takes time, so please be patient.



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Evaluación. *Marking Criteria for MSc Course Work* (2)

Level	Description	Mark awarded
Pass with Distinction 70% or above	Firm evidence of expert knowledge and appropriate skills in all areas assessed. Demonstrates an excellent grasp of a wide range of sources and utilises them in a scholarly fashion. Demonstrates excellent understanding of relevant theoretical and methodological issues. Provides a well-argued and referenced answer, with evidence of outstanding ability to analyse ideas critically and to think in a creative and original manner.	90-100%: Outstanding 80-89%: Excellent 70:89%: First class work



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Evaluación. *Marking Criteria for MSc Course Work (3)*

Pass 50-69%	Expertise is demonstrated across a broad range of topics with evaluative analysis of a high order. Demonstrates a firm grasp of a good range of sources and utilises them in a scholarly fashion. Provides a clear, well-organised answer, showing understanding of relevant theoretical and methodological issues. Some evidence of original thinking.	Pass 60-69%
Pass 50-69%	Evidence of sound knowledge and understanding is demonstrated and ideas can be fluently expressed. Demonstrates knowledge of a good range of sources and utilises them in a scholarly fashion. Provides a clear, well organised answer but has some theoretical and/or methodological weaknesses	Pass 50-59%



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Evaluación. *Marking Criteria for MSc Course Work (4)*

Fail (Resubmit) 30-49%	The level of knowledge and understanding achieved is not acceptable for a pass at postgraduate level. Basic knowledge and skills have been acquired, but the quality of the performance is insufficient for the level of the course. Limited grasp of sources or utilises sources in limited fashion; not well organised answer; limited understanding of theory and/or methods.
Fail (Not entitled to reassessment without retaking the module) 0-29%	Core knowledge and skills have not been acquired and basic understanding has not been achieved. Demonstrates an inadequate grasp of sources or utilises sources in a casual manner; fails to provide a coherent answer; shows inadequate understanding of theory and/or methods.



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Referencias

Universidad de Bath
<http://www.bath.ac.uk/>

Outcomes from institutional audit. The adoption and use of learning outcomes
<http://www.qaa.ac.uk/reviews/institutionalAudit/outcomes/learningoutcomes.pdf>

Oxford University. Masters in Psychological Research, Course Handbook
<http://www.psy.ox.ac.uk/intranet/taughtmsc/mschandbook2007>



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