

## NATURAL SCIENCES TRIPOS, PART II

MICHAELMAS 2007

LENT 2008

EASTER 2008

## ASTROPHYSICS

Course organiser: Prof. J. Pringle (email: jep@ast.cam.ac.uk)  
 Course website: <http://www.ast.cam.ac.uk/teaching/undergrad/courseguide.html>

All lectures will be delivered in *the Raymond and Beverly Sackler Lecture Theatre, Hoyle Building, Institute of Astronomy* except \* which will be held in the *Centre for Mathematical Sciences meeting rooms (MR)* and † in the *Pippard Lecture Theatre at the Cavendish Laboratory (West Cambridge)*.

DR D. A. RITCHIE†  
 Advanced Quantum Physics. M. W. F. 9  
 PROF. G. P. EFSTATHIOU  
 Astrophysical Fluid Dynamics. M. Tu. Th. 10  
 DR I. R. PARRY  
 Topics in Astrophysics. M. W. Th. 11  
 DR M. HAEHNELT  
 Theory of Relativity. Tu. 11, W. F. 10  
 DR R. E. HUNT AND OTHERS\*  
 Computational Projects M. W. F. 2 (6 lectures) MR2

DR E. P. S. SHELLARD\*  
 Cosmology M. W. F. 11 MR3  
 DR S. C. CHAPMAN  
 Structure and Evolution of Stars. M. W. F. 12  
 PROF. G. F. GILMORE  
 Stellar Dynamics and Structure of Galaxies.  
 Tu. W. Th. 10  
 DR M. WINGATE\*  
 Statistical Physics. (16 lectures) Tu. Th 11 MR9

## BIOCHEMISTRY

## BIOLOGICAL AND BIOMEDICAL SCIENCES: MAJOR SUBJECT BIOCHEMISTRY

Course Organiser: Prof. C. J. Howe (email: ch26@mole.bio.cam.ac.uk)  
 Course website: <http://www.bio.cam.ac.uk/sbs/facbiol/bbs/index.html>

Lectures are given in the *Department of Biochemistry, Downing Site building*

The course starts with an introductory lecture by PROF. SIR TOM BLUNDELL at 9 a.m. on M. 1 October.

Core course lectures take place at 9 a.m. and 10.30 a.m. Option course lectures take place throughout the day in Lent Term. Detailed time-tables will be posted in the Department of Biochemistry.

## Core lectures

PROF. E. D. LAUE  
 Aspects of protein structure: genome to proteome (Five lectures, beginning 1 Oct.)  
 DR M. WELCH  
 Thermodynamics refresher for biochemists (One lecture, 5 Oct. at 2.00 p.m.)  
 DR D. NIETLISPACH  
 Chemistry refresher for biochemists (One lecture, 5 Oct. at 3.30 p.m.)  
 PROF. C. W. J. SMITH  
 Eukaryotic mRNA synthesis (Five lectures, beginning 8 Oct.)  
 PROF. C. J. HOWE  
 Gene expression in plants (Four lectures, beginning 8 Oct., at 12.00 on 8, 10 Oct.)  
 PROF. C. J. HOWE  
 Introduction to the problem-based bioinformatics project (One lecture, Oct. 12 at 12.00)  
 DR B. LUISI  
 Protein synthesis and translational control (Five lectures, beginning 15 Oct.)  
 DR L. PELLEGRINI  
 DNA recombination and repair (Four lectures, beginning 15 Oct.)  
 DR D. SCADDEN  
 RNAi and microRNAs (Three lectures, beginning 19 Oct.)  
 DR A. A. GRACE  
 Disease genes: function and manipulation (Two lectures, beginning 22 Oct.)  
 DR T. R. HESKETH  
 Signalling pathways in eukaryotic cells (Four lectures, beginning Oct. 24)  
 DR P. DUPREE  
 Protein targeting to the ER (Three lectures, beginning 24 Oct.)  
 PROF. P. F. LEADLAY  
 Enzyme structure and function (Five lectures beginning 29 Oct.)

## Options lectures

- PROF. G. P. C. SALMOND AND OTHERS  
 Bacterial virulence and antimicrobial chemotherapy (Fifteen lectures)  
 Option Organiser: Prof. G. P. C. Salmond
- DR R. W. BROADHURST AND OTHERS  
 Proteins, nucleic acids and their interactions (Fifteen lectures)  
 Option Organiser: Dr R. W. Broadhurst
- DR M. D. BRAND AND OTHERS  
 Mitochondria and bioenergetics (Fifteen lectures)  
 Option organiser: Dr M. D. Brand
- DR P. DUPREE AND OTHERS  
 Plant cell and molecular biology (Fifteen lectures)  
 Option Organiser: Dr P. Dupree
- PROF. C. W. J. SMITH AND OTHERS  
 Control of gene expression in eukaryotes (Fifteen lectures in part joint with Part II Zoology.)  
 Option Organisers: Prof. C. W. J. Smith and Dr T. Krude
- PROF. K. SIDDLER AND OTHERS  
 Medical biochemistry. Obesity & diabetes – from genes to pathology (Fifteen lectures)  
 Option Organiser: Prof. K. Siddle
- DR F. HOLLFELDER AND OTHERS  
 Enzyme mechanisms and chemical biology (Fifteen lectures)  
 Option Organiser: Dr F. Hollfelder
- DR A. A. GRACE AND OTHERS  
 Systems approaches to modelling cardiovascular and other diseases (Fifteen lectures)  
 Option Organisers: Dr A. A. Grace and Dr R. W. Farndale

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PROF. K. M. BRINDLE  
Molecular imaging (Three lectures, beginning 31 Oct.)

DR A. P. JACKSON  
Protein sorting (Five lectures, beginning 5 Nov.)

PROF. G. P. C. SALMOND  
Bacterial signalling systems (Four lectures, beginning 5 Nov.)

PROF. J. O. THOMAS  
Protein-DNA interactions and gene expression (Five lectures, beginning 12 Nov.)

DR R. W. FARNDALE  
Adhesive and immune receptor signalling (Four lectures, beginning 12 Nov.)

DR T. STEVENS  
Bioinformatics: polypeptide similarity, families and super-families (Two lectures, beginning 16 Nov.)

DR T. HUBBARD  
Bioinformatics: large scale sequencing projects (Two lectures, beginning 20 Nov.)

DR H. R. MOTT  
G protein-based signalling (Two lectures, beginning 20 Nov.)

PROF. T. L. BLUNDELL  
G protein-based signalling (Two lectures, beginning 22 Nov.)

DR G. C. BROWN  
Mitochondria and cell death (Seven lectures, beginning 22 Nov.)

DR S. H. MCLAUGHLIN  
Protein folding *in vivo* (three lectures, beginning 28 Nov.)

**Data handling classes**  
3.15–4.00, 25 Oct., 2.30–3.15, 26 Oct., 2.30–4.00, 1 Nov.

9. DR T. R. HESKETH AND OTHERS  
Oncogenes, tumour suppressor genes, apoptosis and carcinogenesis (Fifteen lectures in part joint with Option A (module 3) of Part II Pathology.)  
Option Organisers: Dr T. R. Hesketh and Dr P. Edwards

10. DR F. R. LIVESEY AND OTHERS  
Stem cell biology (Fifteen lectures)  
Option Organiser: Dr F. R. Livesey

12. PROF. T. L. BLUNDELL AND OTHERS  
Biotechnology (Fifteen lectures)  
Option Organiser: Dr K. Lilley

13. DR J. MATA AND OTHERS  
Regulation of the eukaryotic cell cycle (Fifteen lectures)  
Option Organiser: Dr J. Mata

14. DR A. P. KELLY AND OTHERS  
Molecular immunology (Fifteen lectures).  
Option Organiser: Dr N. J. Gay

**Data handling classes**  
3–3.45, 18, 25 Jan.

## BIOLOGICAL AND BIOMEDICAL SCIENCES

Course organiser: Dr Keith Johnstone (email: [kj10@cam.ac.uk](mailto:kj10@cam.ac.uk))  
Course Website: [www.bio.cam.ac.uk/sbs/facbiol/bbs/index.html](http://www.bio.cam.ac.uk/sbs/facbiol/bbs/index.html)

All students offer a Major Subject, a Minor Subject and a dissertation.

**Major Subjects:** Unless marked with a \*, Major Subjects take their lectures from the corresponding NST Part II subject.

Biochemistry	(see p. 183)
Genetics	(see p. 183)
Mechanisms of Disease*	(see p. 183)
Neuroscience	(see p. 185)
Pathology	(see p. 185)
Pharmacology	(see p. 185)
Physiology, Development and Neuroscience	(see p. 186)
Plant Sciences	(see p. 186)
Psychology	(see p. 186)
Zoology	(see p. 186)

**Minor Subjects:** Unless marked with a \*, Minor Subjects take their lectures from the related NST Part II subject.

Biology of Parasitism*	(see p. 187)
Biological Anthropology*	(Any of Papers BA1, BA2 or BA3 from Part IIB Biological Anthropology – see p. 219)
Education Studies*	(Any of the following papers from Part II of the Education Studies Tripos: Psychology of Education, Sociology of Education, Philosophy of Education, History of Education – see p. 240)
Genetics	(Any of Modules M2, M4, or M5 from NST Part II Genetics – see p. 190)
History of Medicine	(Either Paper 7 or Paper 8 from NST Part II History and Philosophy of Science – see p. 191)
History and Ethics of Medicine*	(see p. 187)
Neuroscience	(Any one of Modules N3, N5, or N6 from NST Part II Neuroscience – see p. 195)
Social and Political Sciences*	(Either Paper Soc 10 or Paper Int 5 from Part II of the Social and Political Sciences Tripos – see pp. 126 and 127)

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## MAJOR SUBJECTS

## BIOCHEMISTRY

Course Organiser: Prof. C. J. Howe (email c.j.howe@mole.bio.cam.ac.uk)  
 Course Website: <http://www.bioc.cam.ac.uk/teaching/partii/index.html>

The Biological and Biomedical Sciences (Major Subject Biochemistry) course consists of the core lectures in the Michaelmas term from NST Part II Biochemistry, plus two options in the Lent Term (see p. 181)

## GENETICS

Course Organisers: Dr M. Segal and Dr C. Farr (email: partII.organisers@gen.cam.ac.uk)  
 Course Website: [www.gen.cam.ac.uk/](http://www.gen.cam.ac.uk/)

The Biological and Biomedical Sciences (Major Subject Genetics) course consists of a choice of four out of the five modules offered for NST Part II Genetics (see p. 190)  
 Minor Subjects consist of any one of modules M2, M4 or M5.

A detailed timetable for this course will be available in the Department of Genetics.

## MECHANISMS OF DISEASE: FROM PROCESS TO PATIENT

Course Organisers: Dr J. H. Xuereb (email: jhx1000@cam.ac.uk) and Dr A. Ibrahim (email: aeki2@cam.ac.uk)

Lectures will be held at 10.30 a.m. daily in the *Lecture Theatre, First Floor, Department of Pathology, Tennis Court Road*, unless otherwise indicated

Seminars and Case Studies will be held in the same venue at 2.00 p.m. unless otherwise indicated

\*Seminar Room 9, Ground Floor, The Clinical School, Addenbrooke's Hospital

\*\*Seminar Room, First Floor, Department of Pathology

\*\*\*Greaves Room, First Floor, Department of Pathology

DR J. H. XUEREBS  
 Introduction to course. (Starts at 9.15 a.m.) Tues. 2 Oct.  
 PROF. A. H. WYLLIE  
 Welcome by the Head of Department. (Starts at 3.00 p.m.)  
 W. 3 Oct.  
 MS I. KUHN  
 Electronic literature searches.\* group 1 (seminar) Th. 4  
 Oct.  
 Electronic literature searches.\* group 2 (seminar) F. 5 Oct.  
 DR J. H. XUEREBS  
 An introduction to dissertations.\*\*\* (Seminar) M. 8 Oct.  
 PROF. M-Q DU  
 How to assess a scientific paper. (Seminar) Tu. 9 Oct.  
 DR A. IBRAHIM  
 Essay-based discussion.\*\* (Seminar) Th. 22 Nov.

## Pathogen and Host Factors in Infectious Disease

DR N. BROWN  
 Sepsis and the host's response to infection. Tues. 2 Oct.  
 DR TREVOR BAGLIN  
 Disseminated intravascular coagulation. (Case Study)  
 Tues. 2 Oct.  
 DR JESSICA WHITE  
 The spectrum of disease due to mycobacterium  
 tuberculosis. W. 3 Oct.  
 DR D. KUMARARATNE  
 Mechanism of immunity to mycobacteria in humans. Th.  
 4 Oct.  
 DR B. KINGSTON  
 Malaria. M 8 Oct.  
 PROF. D. DUNNE  
 Schistosomiasis. Tues 9 Oct.  
 DR M. FARRINGTON  
 Pneumonia: racing against the escalator. W. 10 Oct.  
 DR A. MINSON  
 The nature of prions. F. 12 Oct.  
 DR J. H. XUEREBS  
 Phenotypic spectrum of spongiform encephalopathy.  
 (Lecture: 2.00-3.00pm) F. 12 Oct.

DR J. H. XUEREBS  
 Writing up dissertation.\*\*\* (Seminar). Tues. 5  
 Feb.  
 DR J. H. XUEREBS  
 Essay-based discussion.\*\* (Seminar). F. 8 Feb.  
 DR A. IBRAHIM  
 Essay based discussion.\*\* (Seminar). F. 7 Mar.

## Endocrine and metabolic disease

DR A. CHAUDHRY  
 The kidney as endocrine organ. Tues. 15 Jan.  
 PROF. J. COMPSTON  
 Bone cell physiology. W. 16 Jan.  
 PROF. J. COMPSTON  
 Pathology of metabolic bone disease. Th. 17  
 Jan.  
 DR J. H. XUEREBS  
 Paget's disease. (Case study) Th. 17 Jan.  
 PROF. S. O'RAHILLY  
 Understanding human obesity. F. 18 Jan.  
 PROF. S. O'RAHILLY  
 How insulin works and how it goes wrong.  
 M. 21 Jan.  
 DR J. H. XUEREBS  
 Fasting hypoglycaemia. (Case study) M. 21 Jan.  
 DR A. CHAUDHRY  
 Mechanism of renal damage in diabetes  
 mellitus. Tues. 22 Jan.  
 DR A. CHAUDHRY  
 Pathophysiology of progressive renal disease.  
 W. 23 Jan.  
 DR J. BRADLEY  
 End-stage renal failure. (Case study) W. 23 Jan.  
 PROF. K. CHATTERJEE  
 Principles of nuclear hormone action. Thurs.  
 24 Jan.  
 PROF. K. CHATTERJEE  
 Nuclear receptors in human disease. F. 25 Jan.  
 PROF. K. CHATTERJEE  
 Cushing's syndrome. (Case study) F. 25 Jan.

DR J. H. XUEREBS  
 Essay-based discussion.\*\* (Seminar) F. 2 May.

## Transplantation

DR A. BRADLEY  
 Clinical background to transplantation. Tues.  
 22 April.  
 DR A. BRADLEY  
 Allograft rejection. W. 23 April.  
 DR C. TAYLOR  
 Histocompatibility. Th. 24 April.  
 DR E. BOLTON  
 Immunosuppression I. F. 25 April.  
 PROF. A. BRADLEY  
 Immunosuppression II. M. 28 April.  
 DR E. BOLTON  
 Transplantation tolerance. Tues. 29 April.  
 PROF. A. BRADLEY  
 Xenotransplantation. W. 30 April  
 DR S. CHANDRAN  
 Neural repairs and stem cells-I. Th. 1 May.  
 DR A. CHAUDHRY  
 Kidney graft for complications of diabetes  
 mellitus. (Case study). Th. 1 May  
 DR S. CHANDRAN  
 Neural repairs and stem cells-II. F. 2 May.

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**Diseases of Immunity**

- DR S. STEWART  
Respiratory tract hypersensitivity. M. 15 Oct.
- DR R. ROSS RUSSELL  
Asthma and its consequences. (Case study) M. 15 Oct.
- DR B. COTTRELL  
Infection and immunity in inflammatory bowel disease.  
Tues. 16 Oct.
- DR B. COTTRELL  
Inflammatory bowel disease. (Case study) Tues. 16 Oct.
- DR M. GURNELL  
Autoimmunity in the thyroid gland. W. 17 Oct.
- DR J. H. XUERE B  
Inflammation in the CNS. Th. 18 Oct.
- DR J. H. XUERE B  
Aetiology and pathogenesis of demyelinating diseases.  
F. 19 Oct.
- DR J. H. XUERE B  
Clinico-anatomical correlation in multiple sclerosis. (Case  
study) F. 19 Oct.
- PROF. J. H. GASTON  
The role of HLA antigens in the pathogenesis of arthritis.  
Tues. 23 Oct.
- DR J. H. XUERE B  
Polyarthritis. (Case study) Tues. 23 Oct.
- PROF. J. H. GASTON  
T Lymphocytes in joint inflammation. W. 24 Oct.
- PROF. J. H. GASTON  
Cytokines in arthritis: potential therapeutic targets. Th. 25  
Oct.
- DR J. H. XUERE B  
Acute monoarthritis. (Case study) Th. 25 Oct.
- PROF. J. H. GASTON  
Infectious agents and arthritis: Lyme disease and Reactive  
arthritis. F. 26 Oct.
- DR J. H. XUERE B  
The syndromes produced in renal glomerular injury. Tues.  
30 Oct.
- DR K. G. SMITH  
Systemic lupus erythematosus I. W. 31 Oct.
- DR K. G. SMITH  
Systemic lupus erythematosus II. Th. 1 Nov.
- DR D. KUMARARATNE.  
Immunodeficiency: molecular mechanisms I. M. 5 Nov.
- DR M. FARRINGTON AND DR T. WREGHITT  
Infection in the immunocompromised host. (Case study)  
M. 5 Nov.
- DR D. KUMARARATNE.  
Immunodeficiency: molecular mechanisms II. Tues. 6  
Nov.
- Diseases of red blood cells and platelets**
- DR W. OUWEHAND  
Immune-mediated disorders of erythrocytes and platelets  
I. Th. 8 Nov.
- DR W. OUWEHAND  
Immune-mediated disorders of erythrocytes and platelets  
II. (Lecture:2.00-3.00pm) Th. 8 Nov.
- TBA  
Inherited haemolytic anaemias. F. 9 Nov
- Diseases of white blood cells**
- DR R. TOOZE  
Lymphoma: an immunological perspective I. M. 12 Nov.
- DR R. TOOZE  
Lymphoma: an immunological perspective I.  
(Lecture:2.00-3.00pm) M. 12 Nov.
- DR A. WARREN  
Leukaemia I: transcriptional regulation of haemopoiesis.  
Tues. 13 Nov.
- DR J. CRAIG  
Pathogenesis and management of leukaemia. (Case study:  
starts 2.30pm) Tues. 13 Nov.
- DR A. WARREN  
Leukaemia II: molecular pathology. Th. 15 Nov.
- DR G. FOLLOWS  
Multiple myeloma. F. 16 Nov.
- DR J. CRAIG  
Myeloma kidney (Case study). F. 16 Nov.

- DR S. MIDDLETON  
Gastrointestinal hormones and peptides. M. 28  
Jan.
- DR S. MIDDLETON  
Carcinoid syndrome. Tues. 29 Jan.
- PROF. T. COX  
The lysosome: a gateway to treatment. W. 30  
Jan.
- DR D. O'DONOVAN  
Peroxisomal disorders. Th. 31 Jan.
- PROF. V. P. COLLINS  
Mitochondrial encephalomyopathies. F. 1 Feb.
- Gestational, Paediatric and Inherited Diseases**
- DR S. CHARNOCK-JONES  
Placental vascular morphogenesis. M. 4 Feb.
- DR S. CHARNOCK-JONES  
Pathogenesis of pre-eclampsia. Tues. 5 Feb.
- DR S. CHARNOCK-JONES  
Gestational trophoblastic disease. W. 6 Feb.
- DR K. ONG  
Fetal and early infant development.  
(Lecture: 2.00-3.00pm) Th. 7 Feb.
- DR A. WHITEHEAD  
Pathophysiology of disease in the premature  
baby. F. 8 Feb.
- DR C. ACERINI  
Growth disorders of childhood. M. 18 Feb.
- PROF. I. HUGHES  
Disorders of sex development. Tues. 19 Feb.
- DR E. REID  
Hereditary spastic paraplegia. Th. 21 Feb.
- DR R. ILES  
Molecular and cell biology of cystic fibrosis. F.  
22 Feb.
- Cardiorespiratory disease**
- DR S. STEWART  
Irreversible airway narrowing & alveolar wall  
destruction. M. 25 Feb.
- DR J. RUDD  
Atherosclerosis. Tues. 26 Feb.
- PROF. M. BENNETT  
Pathobiology of intervention in coronary artery  
disease. W. 27 Feb.
- PROF. M. BENNETT  
Coronary artery disease. (Case study: starts at  
11.45am). W. 27 Feb.
- DR M. GODDARD  
Ischaemic cardiomyopathy. Th. 28 Feb.
- DR J. H. XUERE B  
Infectious endocarditis. (Case study). Th. 28  
Feb.
- Disorders of the skin**
- DR J. STERLING  
Normal and abnormal skin structure. M. 3  
Mar.
- DR J. STERLING  
Skin as a renewable organ. Tues. 4 Mar.
- DR J. STERLING  
Skin as organ of immunity.  
(Lecture: 2.00-3.00pm). Tues. 4 Mar.
- DR N. BURROWS  
Ehlers-Danlos syndrome.  
(Case study: starts at 10.30am). W. 5 Mar.
- DR J. STERLING  
Disorders of the skin immune system. Th. 6  
Mar.
- DR J. STERLING  
Bullous skin disease. (Case study). Th. 6 Mar.
- Neurodegeneration**
- DR J. H. XUERE B  
Alzheimer's disease: amyloid deposition in the  
brain. F. 7 Mar.
- DR J. H. XUERE B  
Alzheimer's disease & non-Alzheimer dementia:  
abnormalities of tau. M. 10 Mar.

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**Common Cancers**

DR V. SAVE  
Helicobacter infection, ulceration and malignancy. M. 19 Nov.

DR E. CAMERON  
Oesophageal reflux. (Case study) M. 19 Nov.

DR V. SAVE  
Coeliac disease: malabsorption & malignancy. Tues. 20 Nov.

DR V. SAVE  
Steatorrhoea. (Case study) Tues. 20 Nov.

DR H. SIMPSON  
Thyroid cancer. W. 21 Nov.

DR M. GURNELL  
An enlarged thyroid gland. (Case study) W. 21 Nov.

DR M. ARENDS  
Familial predisposition to cancer: colorectal cancer. Th. 22 Nov.

DR A. IBRAHIM  
Epigenetics in carcinogenesis. F. 23 Nov.

PROF. C. CALDAS  
Molecular biology of breast cancer. M. 26 Nov.

DR A. CLUROE  
A lump in the breast: a multidisciplinary approach to cancer. (Case study) M. 26 Nov.

DR M. ARENDS  
Infection and cancer: molecular biology of cervical cancer. Tues. 27 Nov.

DR J. H. XUERE B  
Clinico-anatomical correlation of pituitary adenoma. (Case study) Tues. 27 Nov.

PROF. V. P. COLLINS  
Cerebral gliomas: the pathway and molecular biology. W. 28 Nov.

DR J. H. XUERE B  
Cerebral oedema and intracranial pressure. (Case study) W. 28 Nov.

DR C. BACON  
Tumor immunology. Th. 29 Nov.

DR N. COLEMAN  
Biology of some childhood neoplasms. (Lecture: 2.00-3.00pm) Th. 29 Nov.

DR D. RASSL  
Lung cancer. F. 30 Nov.

DR R. RINTOUL  
Lambert-Eaton syndrome. (Case study) F. 30 Nov.

DR R. DAVIES  
Tau-related dementia syndromes. (Case study). M. 10 Mar.

DR J. H. XUERE B  
Motor system disorders: ubiquitin-proteasome & mitochondrial dysfunction. Tues. 11 Mar.

DR R. BARKER  
Movement disorders. (Case study). Tues. 11 Mar.

**Hepatobiliary disease**

DR S. DAVIES  
Cirrhosis of the liver. W. 12 Mar.

DR S. DAVIES AND MR R. PRASEEDOM  
Jaundice. (Case study). W. 12 Mar.

DR S. DAVIES  
Portal hypertension and liver failure. Th. 13 Mar.

DR S. DAVIES AND DR G. ALEXANDER  
Viral hepatitis. (Case study). Th. 13 Mar.

**NEUROSCIENCE**Course organiser: Dr. John Rogers (email: [jhr11@cam.ac.uk](mailto:jhr11@cam.ac.uk))Course Website: [www.pdn.cam.ac.uk/teaching/](http://www.pdn.cam.ac.uk/teaching/)General enquiries: Paul Frost and Vicky Johnson (Room E4, Physiology), or: [pdn-part2-admin@lists.cam.ac.uk](mailto:pdn-part2-admin@lists.cam.ac.uk)

The Biological and Biomedical Sciences (Major Subject Neuroscience) course consists of any four of the eight modules offered for Part II Neuroscience. (see p. 195).

Detailed timetables will be posted in the Department

**PATHOLOGY**Course Organiser: Dr A Kelly (email: [apk23@cam.ac.uk](mailto:apk23@cam.ac.uk))Course Website: [www.path.cam.ac.uk/](http://www.path.cam.ac.uk/)

All lectures will be given in the Department of Pathology unless otherwise stated.

The Biological and Biomedical Sciences (Major Subject Pathology) course consists of a choice of two out of the five modules of NST Part II Pathology (see p. 197)  
(however a combination of modules A and E is prohibited).

**PHARMACOLOGY**Course Organiser: Dr R. D. Murrell-Lagnado (email: [rdm1003@cam.ac.uk](mailto:rdm1003@cam.ac.uk))Course Website: [www.phar.cam.ac.uk/teaching/tea\\_part2.html](http://www.phar.cam.ac.uk/teaching/tea_part2.html)

The Biological and Biomedical Sciences (Major Subject Pharmacology) course consists of the same lectures as for NST Single Subject Pharmacology (see p. 198)

**NATURAL SCIENCES TRIPOS, PART II (continued)****PHYSIOLOGY, DEVELOPMENT AND NEUROSCIENCE**

Course organiser: Dr. John Rogers (email: [jhr11@cam.ac.uk](mailto:jhr11@cam.ac.uk))  
 Course Website: [www.pdn.cam.ac.uk/teaching/](http://www.pdn.cam.ac.uk/teaching/)

General enquiries: Paul Frost and Vicky Johnson (Room E4, Physiology), or: [pdn-part2-admin@lists.cam.ac.uk](mailto:pdn-part2-admin@lists.cam.ac.uk)

The Biological and Biomedical Sciences (Major Subject Physiology, Development and Neuroscience) course consists of a series of workshops, lectures and seminars around a framework of modules. The combinations offered are: Development and Reproductive Biology: P3, P4, P6, P7. Integrative Physiology: P1, P3, P7, P8. (see p. 199)

Detailed timetables will be posted in the Department

**PLANT SCIENCES**

Course Organiser: Prof. Howard Griffiths (email: [hg230@cam.ac.uk](mailto:hg230@cam.ac.uk))  
 Course Website: [www.plantsci.cam.ac.uk/teaching/psii/index.html](http://www.plantsci.cam.ac.uk/teaching/psii/index.html)

All lectures take place in *the Tom ap Rees Lecture Theatre, Department of Plant Sciences* unless otherwise stated

The Biological and Biomedical Sciences (Major Subject Plant Sciences) course consists of lectures from modules from NST Part II Plant Sciences. Students can offer either Cellular Plant Sciences (modules M1, M4, L1 and L4), or Ecological Plant Sciences (modules M3 and either M1 or Zoology M3; and L2, Zoology. L2). (see p. 203 and 205)

**PSYCHOLOGY**

Course Organiser: Dr K. C. Plaisted (email: [kcp1000@cam.ac.uk](mailto:kcp1000@cam.ac.uk))  
 Course Website: [www.psychol.cam.ac.uk/pages/undgrad.html#Courseb](http://www.psychol.cam.ac.uk/pages/undgrad.html#Courseb)

Lectures will be held in the *Lecture Theatre, Department of Experimental Psychology* unless otherwise stated

The Biological and Biomedical Sciences (Major Subject Psychology) course consists of the same lectures as for Part II Psychology (see p. 204)

**ZOOLOGY**

Course Organiser: Dr N. Mundy (email: [nim21@cam.ac.uk](mailto:nim21@cam.ac.uk))  
 Course Website: [www.zoo.cam.ac.uk/degree/2zoology/index.html](http://www.zoo.cam.ac.uk/degree/2zoology/index.html)

Lectures will be given in the *Department of Zoology* unless otherwise stated

The Biological and Biomedical Sciences (Major Subject Zoology) course offers six Major Subjects, made up of modules offered in NST Part II Zoology (see p. 205) and some modules offered in NST Part II Plant Sciences (see p. 203) and NST Part II Genetics (see p. 190). The following combinations are available:

*Cells and Development:* Modules M6, M7 or M8 and a choice of two modules from L5, L6 or L7

*Behaviour:* Modules M4, M5, L2 and L3.

*Vertebrate Biology:* Two modules chosen from M1, M3 or M5, and L1 and L3.

*Ecology and Conservation:* Two modules from M2, M3 or M5 and L2 and L3

*Ecology and Genetics:* Two modules chosen from M2, M3 or M5, and two chosen from L2, L3 or the Genetics module M5 (Evolutionary Genetics)

*Ecology and Plant Sciences:* Two modules from M2 and M3, or Plant Sciences M3 (Dynamics and History and Future of Vegetation) and L2, L3

**NATURAL SCIENCES TRIPOS, PART II (continued)**

MICHAELMAS 2007

LENT 2008

EASTER 2008

**MINOR SUBJECTS****BIOLOGY OF PARASITISM**

Course Organiser: Dr S. Lloyd (email: ssl1000@hermes.cam.ac.uk)  
 Course website: www.bio.cam.ac.uk/sbs/facbiol/bbs/bop.html.

All lectures take place in the *Department of Pathology* on M. W. Th. 4 unless otherwise stated

Lecture 1. Overview of developments. Basic morphology and life cycles.  
 Lectures 2–8. Behavioural adaptations for transmission. Structural and behavioural modifications, recognition by free-living stages (trematodes, nematodes, arthropods), development in intermediate hosts.  
 Lecture 9. Innate invertebrate responses to parasites (*Plasmodium* etc.)  
 Lectures 10–11. Season and hypobiosis of GI helminths of animals and man.  
 Lecture 12. Endemic stability and effects of inappropriate control.  
 Lectures 13–19. Zoonoses (*Taenia*, *Echinococcus*, *Trichinella*, *Toxocara*, *Giardia*, *Cryptosporidium*, *Fasciola* and fish-borne trematodes)  
 Lecture 20–22. Pathophysiology and pathology of parasites in gastrointestinal tract and liver including biochemical changes.  
 Lecture 23. Immune responses to arthropods.  
 Lecture 24 Immune responses to gastrointestinal helminths.

Lectures 25–29. Chemotherapy and resistance to acaricides, insecticides and anthelmintics.  
 Lecture 30–32. Alternate methods of control, including bioinsecticides and biological control.

**BIOLOGICAL ANTHROPOLOGY**

Course Organiser: Professor Nick Mascie-Taylor (email: nmt1@cam.ac.uk)  
 Course website: www.bio.cam.ac.uk/sbs/facbiol/bbs/BiolAnthweblink.pdf.

The Biological and Biomedical Sciences (Minor Subject Biological Anthropology) courses consist of any one of the following three papers, which form part of Part IIB Biological Anthropology: Paper BA1: The Human Animal, Paper BA2: The Human Journey, or Paper BA3: The Human Lifespan (see p. 319)

**EDUCATION STUDIES**

Course Organiser: Dr J. Whitehead (email: jmw3@cam.ac.uk)  
 Further information can be obtained at <http://www.educ.cam.ac.uk/ugrad/edstud.html>

The Biological and Biomedical Sciences (Minor Subject Education) courses consist of any one of the following papers from Part II of the Education Studies Tripos:  
 Psychology of Education, Sociology of Education, Philosophy of Education, History of Education (see p. 240)

**GENETICS**

Course Organisers: Dr M. Segal and Dr C. Farr (email: partII.organisers@gen.cam.ac.uk)  
 Course Website: www.gen.cam.ac.uk/

The Biological and Biomedical Sciences (Minor Subject Genetics) courses consist of any one of modules M2, M4 or M5 offered for NST Part II Genetics (see p. 190)  
 A detailed timetable for this course will be available in the Department of Genetics.

**HISTORY OF MEDICINE**

Course Organiser: Dr V. Heggie (email: hps-admin@lists.cam.ac.uk)

The Biological and Biomedical Sciences (Minor Subject History of Medicine) courses consist of one of the following two papers, which form part of NST Part II History and Philosophy of Science: Paper 7: Medicine from Antiquity to the Enlightenment or Paper 8: Modern Medicine and Biomedical Sciences (see p. 191)

**NATURAL SCIENCES TRIPOS, PART II (continued)**

MICHAELMAS 2007

LENT 2008

EASTER 2008

**HISTORY AND ETHICS OF MEDICINE**

Course Organiser: Dr K. Brosnan (email: [hps-admin@lists.cam.ac.uk](mailto:hps-admin@lists.cam.ac.uk))  
 Further information can be obtained at [www.hps.cam.ac.uk/studying/hem.html](http://www.hps.cam.ac.uk/studying/hem.html)

*Lectures are held in Mill Lane Lecture Room 2.*

DR K. BROSINAN, MR S. JOHN AND OTHERS

Medical Ethics. Tu. 4 (weeks 1–8)

PROF. J. FORRESTER, DR V. HEGGIE AND DR L. KASSELL

History of Medicine. M. 4 (weeks 1–8)

The same continued. Tu. 4 (weeks 1–4)

The same continued. M. 4 (weeks 1–4)

*Students taking courses organised by the Department of HPS should come to the Part II induction meeting on Wednesday 3 October at 11am in Seminar Room 2, Department of History and Philosophy of Science, Free School Lane. Discussion of the special needs of Part II students taking the BBS one-paper subjects in History of Medicine and History and Ethics of Medicine will be included in this meeting.*

**NEUROSCIENCE**

Course organiser: Dr John Rogers (email: [jhr11@cam.ac.uk](mailto:jhr11@cam.ac.uk))

Course Website: [www.pdn.cam.ac.uk/teaching/](http://www.pdn.cam.ac.uk/teaching/)

General enquiries: Paul Frost & Vicky Johnson (Room E4, Physiology), or: [pdn-part2-admin@lists.cam.ac.uk](mailto:pdn-part2-admin@lists.cam.ac.uk)

The Biological and Biomedical Sciences (Minor Subject Neuroscience) courses consist of any one of modules N3, N5, N6. (see p. 195)  
 Detailed timetables will be posted in the Department.

**SOCIAL AND POLITICAL SCIENCES**

Course website: [www.sps.cam.ac.uk/undergraduate/index.html](http://www.sps.cam.ac.uk/undergraduate/index.html).

The Biological and Biomedical Sciences (Minor Subject Social and Political Sciences) courses consist of either of the following two papers, which form part of Social and Political Sciences Tripos Part II

Course Organiser: Dr D. Weinberg (email: [dtw23@cam.ac.uk](mailto:dtw23@cam.ac.uk))

Paper Soc 10: Medicine, Body, and Society (see p. 126)

Course Organiser: Professor J. Mitchell (email: [jewm2@cam.ac.uk](mailto:jewm2@cam.ac.uk))

Paper Int 5: Gender and Society (see p. 127)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

CHEMISTRY (OPTION A AND OPTION B)  
PHYSICAL SCIENCES: HALF SUBJECT CHEMISTRYCourse Organiser: Dr J. H. Keeler (email: jhk10@cam.ac.uk)  
Course Website: www-teach.ch.cam.ac.uk/All lectures will be given in the *Department of Chemistry, Lensfield Road*Students must register for the course in the *Department of Chemistry, Lensfield Road*, between 0900 and 1300 or 1400 and 1600 on Tu. 2 Oct.

A booklet containing details of the times of the lecture courses will be given out on registration. Others interested in the lecture courses can obtain a copy of this booklet on application to the Course Organiser. This information is also available from the website, www-teach.ch.cam.ac.uk

All students must attend an introductory talk concerning the practical course at 1200 on W. 3 Oct. in the *Pfizer Lecture Theatre*.All lectures will be given in the *Department of Chemistry, Lensfield Road* unless otherwise statedEXPERIMENTAL AND THEORETICAL PHYSICS  
PHYSICAL SCIENCES: HALF SUBJECT EXPERIMENTAL AND THEORETICAL PHYSICSDepartmental Contact: Dr R. Padman (email: II-physics@phy.cam.ac.uk)  
Course Website: www.phy.cam.ac.uk/teaching/Students offering **Option A** must take the whole of **course H** in the Michaelmas Term and 2 of the lecture courses in the Lent and Easter Terms. They must in addition take **course K**, and a suitable selection from the material of **courses J** and **S**.Students offering **Option B** must take the whole of **course H** in the Michaelmas Term and either 3 or 4 of the lecture courses in the Lent and Easter Terms. In addition they must take a suitable selection from the material of **courses J** and **S**.The material of **course J** is examined at the start of the term following that in which each block, TP1 and TP2, is given.All students are recommended to attend the non-examinable **Course I**.The course will begin with a meeting on the first Wednesday of Full Term (3 Oct.) at 9.30 a.m. in the *Pippard Lecture Theatre*.

Students taking Part II Physical Sciences and Half Subject Experimental and Theoretical Physics will take the Advanced Quantum Physics course in the Michaelmas term and one of the Quantum Condensed Matter Physics, Astrophysics, Particle and Nuclear Physics, and Soft Condensed Matter and Biophysics courses in the Lent and Easter terms. Candidates also take three units of further work selected from: the Computational Physics course, pre-approved Vacation Work, experiment E1 or course TP1, experiment E2 or course TP2, a Research Review, Physics in Action (two units), and Physics Education (two units). Neither of the courses TP1 and TP2 may be taken unless Mathematics was offered in Part IB of the Natural Sciences Tripos. A prior knowledge of Physics equivalent to the material covered in Part IB Physics and Part IB Advanced Physics will be assumed.

Lectures are given at the *Cavendish Laboratory (West Cambridge)*, in the *Pippard Lecture Theatre* unless otherwise stated**Course H**

PROF. R. J. NEEDS  
Thermal and Statistical Physics. Tu. Th. 10

PROF. D. A. RITCHIE  
Advanced Quantum Physics. M. W. F. 9

PROF. N. R. COOPER  
Relativity, Electrodynamics and Light. M. W. F. 10  
(First twenty lectures)

DR R. PADMAN AND OTHERS  
Computational Physics. Tu. Th. 9 (First eight lectures)  
Classes weekdays 2–5 (8 Oct. – 30 Nov.). Students attend  
one day per week

**Course I**

DR M. GROSCHÉ  
Quantum Condensed Matter Physics. M. 10  
W. 9

PROF. M. S. LONGAIR  
Astrophysics. Tu. F. 9

PROF. D. R. WARD AND DR C. G. LESTER  
Particle and Nuclear Physics. Tu. Th. 10

DR P. CICUTA  
Soft Condensed Matter and Biophysics. M.  
Th. 9

DR M. GROSCHÉ  
The same continued. Tu. Th. 10, M. 12 (First  
six lectures)

PROF. M. S. LONGAIR  
The same continued. M.W.F. 10 (First six  
lectures)

PROF. D. R. WARD AND DR C. G. LESTER  
The same continued. M.W.F. 9 (First six  
lectures)

DR P. CICUTA  
The same continued. Tu. Th. 9, F. 12 (First  
six lectures)

DR M. P. HOBSON  
Concepts in Physics. W. F. 10 (Ten lectures  
beginning 8 Feb.)

THE STAFF OF THE CAVENDISH LABORATORY  
Current Research Work in the Cavendish  
Laboratory (not examinable). See Part III  
Experimental and Theoretical Physics  
(p. 208)

**Course J**

PROF. B. R. WEBBER AND DR C. H. W. BARNES  
Theoretical Physics TP1. Tu. Th. 12–1 (Twelve lectures  
beginning 9 Oct.); Tu. 2–4 (Four classes, 16 Oct., 30  
Oct., 13 Nov., 27 Nov.)

PROF. N. R. COOPER AND PROF. M. C. PAYNE  
Theoretical Physics TP2. Tu. Th. 12–1  
(Twelve lectures, beginning 22 Jan.); Tu.  
2–4 (Four classes, 29 Jan., 12 Feb., 26  
Feb., 11 Mar.)

**Course K**

PROF. J. A. C. BLAND AND DR J. S. RICHER  
Physics in Action. F. 11.30 *Mott Seminar  
Room*  
Group Project Work. F. 2–4 *Ryle Seminar Room*

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## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

**Course S**

DR W. ALLISON AND OTHERS  
Experiment E1. Registration W. 9.30 (3 Oct.)  
PROF. J. R. CARTER AND OTHERS  
Research Review.  
DR L. JARDINE-WRIGHT AND OTHERS  
Physics Education.

DR W. ALLISON AND OTHERS  
Experiment E2. Registration W. 2.30 (16 Jan.)  
PROF. J. R. CARTER AND OTHERS  
The same continued.  
DR L. JARDINE-WRIGHT AND OTHERS  
The same continued.

PROF. J. R. CARTER AND OTHERS  
The same continued.  
DR L. JARDINE-WRIGHT AND OTHERS  
The same continued.

**GENETICS**  
**BIOLOGICAL AND BIOMEDICAL SCIENCES: MAJOR AND MINOR SUBJECT GENETICS**

Course Organisers: Dr M. Segal and Dr C. Farr (email: partII.organisers@gen.cam.ac.uk)  
Course Website: www.gen.cam.ac.uk/

All lectures take place in the *Part II Lecture Room (G6)*, Department of Genetics, on M. Tu. W. Th. F.,  
unless otherwise stated

A detailed timetable for this course will be available in the Department of Genetics.

**M1: Chromosomes, the Cell Cycle and Cancer**

PROF. M. ASHBURNER, PROF. D. GLOVER, DR C. FARR, DR J. RAFF AND DR M. SEGAL  
(Twenty-four lectures, beginning 4 Oct.)

**M2: Plant and Microbial Genetics**

DR D. SUMMERS, DR P. OLIVER, DR J. ARCHER AND DR I. FURNER  
(Twenty-four lectures, beginning 4 Oct.)

**M3: Developmental Genetics**

PROF. A. MARTINEZ-ARIAS, PROF. D. ST JOHNSTON, DR M. SEGAL AND DR J. AHRINGER  
(Twelve lectures, beginning 8 Nov.)

**M4: Human Genetics, Genomics and Systems Biology**

DR D. MACDONALD, DR C. FARR, DR S. RUSSELL AND DR G. MICKLEM  
(Twelve lectures, beginning 8 Nov.)

**Long Reading Weekend.** Dates to be announced

**M5: Evolutionary Genetics**

PROF. M. MAJERUS, DR F. BALLOUX, DR D. MACDONALD AND DR L. LAWSON-HANDLEY  
(Twenty-four lectures, beginning 17 Jan.)

**M3: Developmental Genetics**

The same continued. (Twelve lectures, beginning 17 Jan.)

**M4: Human Genetics, Genomics and Systems Biology**

The same continued. (Twelve lectures, beginning 4 Feb.)

**Reading Week.** Dates to be announced.

**Revisions seminars** (Five sessions, dates to be announced)

**GEOLOGICAL SCIENCES AND MINERAL SCIENCES**  
**PHYSICAL SCIENCES: HALF SUBJECT GEOLOGICAL SCIENCES AND MINERAL SCIENCES**

Course Website: <http://www.esc.cam.ac.uk/new/v10/teaching/geology/ii-iii/courses.html>

Students offering Option A (leading to the three year degree – Part IIA) must take two core courses in the Michaelmas Term and two options in the Lent and Easter Terms. They must in addition attend the Skills course S1 in the Michaelmas Term.

Students offering Option B (leading to Part IIB and to the four year degree – Part III) must take two core courses in the Michaelmas Term and three options in the Lent and Easter Terms. They must in addition attend the Skills course S1 in the Michaelmas Term.

**Core C1 Geophysics**

PROF. J. A. JACKSON, DR F. TILMANN AND PROF. D. P. MCKENZIE  
Convenor: Prof. J. A. Jackson  
Lectures. Tu. Th. 9 *Harker Room*  
**Practicals.** Tu. Th. 10–12 *Petrology Laboratory*

**Core C2 Petrology and Geochemistry**

DR T. J. B. HOLLAND, DR A. GALY AND DR S. GIBSON  
Convenor: Dr T. J. B. Holland  
Lectures. T. F. 2 *Harker Room*  
**Practicals.** T. F. 3–5 *Petrology Laboratory*

**Core C3 Sedimentology and Palaeontology**

PROF. I. N. MCCAVE AND DR L. HARPER  
Convenor: Prof. I. McCave  
Lectures. W. F. 9 *Harker Room*  
**Practicals.** W. F. 10–12 *Palaeontology Laboratory*

**Option 1 Basin Dynamics**

DR N. J. WHITE ET AL  
Convenor: Dr N. J. White  
Lectures. Tu. Th. 2 *Tilley Room*  
**Practicals.** Tu. Th. 3–4.30 *Petrology Laboratory*

**Option 2 Sedimentary Systems**

DR N. H. WOODCOCK, DR N. HOVIUS PROF. I. N. MCCAVE, DR K. MCNAMARA ET AL  
Convenor: Dr N. H. Woodcock  
Lectures. W. F. 9 *Harker Room*  
**Practicals.** W. F. 10–11.30 *Petrology Laboratory*

**Option 3 Metamorphic and Igneous Processes**

DR T. J. B. HOLLAND, DR M. EDMONDS AND DR J. MACLENNAN  
Convenor: Dr T. J. B. Holland  
Lectures. M. W. 2 *Harker Room*  
**Practicals.** M. W. 3–4.30 *Palaeontology Laboratory*

The same continued. (Eight revision sessions)

The same continued. (Eight revision sessions)

The same continued. (Eight revision sessions)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

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**Core C4 Mineralogy**

DR M. WELCH, PROF. M. A. CARPENTER AND DR R. J. HARRISON  
 Convenor: Prof. M. A. Carpenter  
 Lectures. M. 9, W. 2 *Harker 2 room*  
**Practicals.** M. 10–12, W. 3–5 *IB Mineralogy Laboratory*

**Core C5 Mineral Physics**

DR M. T. DOVE AND MR P. WELCHE  
 Convenor: Dr M. T. Dove  
 Lectures. W. 9, F. 2 *Harker 2 room*  
**Practicals.** W. 10–12, F. 3–5 *IB Minerals Laboratory*

**Skills Course S1**

DR N. H. WOODCOCK  
 Convenor: Dr N. H. Woodcock  
 M. Th. 2–5 *Harker Room and Computer Room* (First three weeks)

**Field Course to Greece** 30 November – 8 December or 4–12 December

PROF. J. A. JACKSON, DR N. J. WHITE AND DR A. GALY

**Option M3 Dynamics of atoms in Minerals**

PROF. J. SCOTT, DR I. FARNAN AND AND PROF. S. A. T. REDFERN  
 Convenor: Dr I. Farnan  
 Lectures. Th. 2, F. 9 *Harker 2 room*  
**Practicals.** Th. 3–4.30, F. 10–11.30 *IB Minerals Lab*

**Option 4 Long Term Climate Change**

PROF. I. N. MCCAIVE, PROF. M. J. BICKLE ET AL.  
 Convenor: Prof. M. J. Bickle  
 Lectures. Tu. Th. 9, *Harker Room*  
**Practicals.** Tu. Th. 11–12.30, *Petrology Laboratory*

**Option 5 Evolutionary Palaeobiology**

DR N. J. BUTTERFIELD AND DR A. GOSWAMI  
 Convenor: Dr N. J. Butterfield  
 Lectures. M. 9, F. 2 *Harker Room*  
**Practicals.** M. 10–11.30, F. 3–4.30  
*Palaeontology Lab*

**Option M1 Mineralogy of the Deep Earth**

DR A. DEUSS, PROF. S. A. T. REDFERN PROF. E. ARTACHO AND DR M. WELCH  
 Convenor: Prof. M. A. Carpenter  
 Lectures: Tu., F. 2 *Harker 2 room*  
**Practicals.** Tu. F. 3–4.30 *IB Minerals Laboratory*

**Option M2 Phase Transitions**

PROF. M. T. DOVE AND PROF. M. A. CARPENTER  
 Convenor: Prof. M. T. Dove  
 Lectures. M. 9, W. 2 *Harker 2 room*  
**Practicals.** M. 10–11.30, W. 3–4.30 *IB Minerals Laboratory*

The same continued. (Eight revision sessions)

The same continued. (Eight revision sessions)

The same continued. (Eight revision sessions)

The same continued. (Eight revision sessions)

## HISTORY AND PHILOSOPHY OF SCIENCE

Course Organiser: Prof. M. Kusch (email: [mphk2@cam.ac.uk](mailto:mphk2@cam.ac.uk))

A detailed timetable and course handbook are available from the Department and at [www.hps.cam.ac.uk/timetable](http://www.hps.cam.ac.uk/timetable)

*Prof. Kusch would like to see all Part II students taking HPS on Wednesday 3 Oct. at 11 a.m. in Seminar Room 2, Department of History and Philosophy of Science.*

All classes and seminars will be held in the *History and Philosophy of Science Seminar Rooms, Free School Lane* unless otherwise stated.

**Primary Source Seminars**

*It is essential that students attend four seminars, three from the papers they are taking and one other.*

## Paper 1: DR E. ROBSON

Letters, Queries and Reports from Assyrian Scholars, <http://cdl.museum.upenn.edu/hea/>. Th. 10 (weeks 1–4)

## Paper 2: PROF. S. SCHAFFER AND OTHERS

Fontenelle (tr. Behn), *A Discovery of New Worlds* (1688). F. 2 (weeks 1–4)

## Paper 3: PROF. J. SECORD

F. Burkhardt (ed), *Charles Darwin's Letters: A Selection, 1825–1859*; [www.darwinproject.ac.uk](http://www.darwinproject.ac.uk). W. 4 (weeks 1–4)

## Paper 4: DR K. BROSANAN

Gould and Lewontinu, *The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme*. W. 10 (weeks 1–4)

## Paper 5: PROF. M. KUSCH AND DR M. SPREVAK

Paul Boghossian, *Fear of Knowledge: Against Relativism and Constructivism* (2006), chapters 5–7. Tu. 4 (weeks 1–4)

## Paper 6: PROF. J. FORRESTER

Sigmund Freud, 'Notes Upon a Case of Obsessional Neurosis' (1909) ['The Rat Man']. W. 2 (weeks 1–4)

## Paper 7: DR L. TOTELIN

Hippocrates, 'On Regimen' (with an English translation by W.H.S. Jones), Vol. IV, pp. 224–447. F. 12 (weeks 1–4)

## Paper 8: DR V. HEGGIE

*The Report of the Inter-Departmental Committee on Physical Deterioration* (HMSO, 1904). Tu. 2 (weeks 1–4)

## Paper 9: PROF. N. JARDINE, MR N. TOSH AND MS H. MACDONALD

C.P. Snow, *The Two Cultures and the Scientific Revolution* (1959) and F.R. Leavis, *Two Cultures? The Significance of C. P. Snow* (1962). M. 10 (weeks 1–4)

**Dissertation Seminars**

Tu. W. 4 (weeks 1–4)

*It is essential that students attend at least two of these seminars.*

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## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

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EASTER 2008

**(Paper 1) Classical Traditions in the Sciences**

Course Organisers: Dr E. Robson (email: er264@cam.ac.uk) and Dr L. Taub (email: lct1001@cam.ac.uk)

- DR E. ROBSON  
Primary Source. Th. 10 (weeks 1–4)
- PROF. N. JARDINE, PROF. R. MCKITTERICK, DR S. KUSUKAWA AND DR L. TAUB  
Introduction. F. 11 (weeks 1–4) (*Essential. No supervisions.*)
- DR L. TAUB AND DR C. EAGLETON  
Instruments, Books and Collections. F. 11 (weeks 5–8)
- DR A. CUNNINGHAM  
Sects and Nature. F. 2 (weeks 5–8)
- DR L. TAUB  
Ancient Mediterranean Science. Tu. 11 (weeks 1–8)

**(Paper 2) Natural Philosophies: Renaissance to Enlightenment**

Course Organisers: Prof. S. Schaffer (e-mail: sjs16@cam.ac.uk) and Dr P. Fara (e-mail: pf10006@cam.ac.uk)

- DR P. FARA, MR R. GASKELL, PROF. S. SCHAFFER AND DR S. WEEKS  
Primary Source. F. 2 (weeks 1–4)
- DR L. KASSELL  
Occult Philosophy. W. 11 (weeks 1–8)
- DR P. FARA, DR S. WEEKS AND PROF. S. SCHAFFER  
Natural Philosophy and Exact Sciences. Tu. 3 (weeks 1–8)

**(Paper 3) Science, Industry and Empire**

Course Organisers: Prof. J. Secord (email: jas1010@cam.ac.uk) and Prof. S. Schaffer (email: sjs16@cam.ac.uk)

- PROF. J. SECORD  
Primary Source. W. 4 (weeks 1–4)
- PROF. S. SCHAFFER, PROF. J. SECORD AND OTHERS  
Science, Industry and Empire. W. 4 (weeks 5–8); Tu. 12 (weeks 1–8)
- DR S. QURESHI  
Science and Race. M. 3 (weeks 5–8)

**(Paper 4) Metaphysics, Epistemology and the Sciences**

Course Organiser: Prof. P. Lipton (email: pl112@cam.ac.uk)

- DR K. BROSNAN  
Primary Source. W. 10 (weeks 1–4)
- PROF. P. LIPTON  
Explanation, Causation and Law. W. 12 (weeks 1–8)
- DR J. BUTTERFIELD  
Philosophy of Physics. M. 11 (weeks 1–4)
- MR N. TOSH  
Pragmatism and Truth. M. 11 (weeks 5–8)

**(Paper 5) Science and Technology Studies**

Course Organiser: Prof. M. Kusch (email: mphk2@cam.ac.uk)

- PROF. M. KUSCH AND DR M. SPREVAK  
Primary Source. Tu. 4 (weeks 1–4)
- PROF. M. KUSCH  
Philosophy of the Social Sciences. F. 3 (weeks 1–8)
- PROF. S. SCHAFFER  
Sociology of Scientific Knowledge. F. 10 (weeks 1–8)

- DR E. ROBSON  
Patronage and Science in the Middle East. W. 11 (weeks 1–8)
- PROF. SIR GEOFFREY LLOYD  
Greek and Chinese Science. M. 3 (weeks 1–4)
- DR N. EL-BIZRI  
Arabic Science. M. 3 (weeks 5–8)
- DR S. KUSUKAWA  
Mapping the World. Tu. 3 (weeks 5–8)

- PROF. N. JARDINE, DR E. SPARY AND DR P. WHITE  
Natural Histories. M. 11 (weeks 1–8)
- DR C. EAGLETON  
Instruments, Models and Tools. F. 4 (weeks 1–4)
- DR P. FARA, DR S. WEEKS AND PROF. S. SCHAFFER  
The same continued. F. 10 (weeks 1–4)
- DR C. CULLEN  
Science and Cross-Cultural Encounter in China: From Matteo Ricci to the Macartney Embassy. F. 10 (weeks 5–8)

- DR R. ANDERSON AND PROF. J. SECORD  
Instruments and Exhibitions. Tu. 11 (weeks 5–8)
- PROF. S. SCHAFFER, PROF. J. SECORD AND OTHERS  
The same continued. W. 10 (weeks 1–8)
- DR P. WHITE  
The Experimental Novel. M. 10 (weeks 1–4)
- DR E. ROBSON  
Empire, Science and Biblical Archaeology. M. 10 (weeks 5–8)
- PROF. J. SECORD  
Images of the Earth. Tu. 11 (weeks 1–4)

- PROF. M. KUSCH  
Naming and Necessity. Tu. 10 (weeks 1–8)
- PROF. J. FORRESTER  
Thinking in Cases. Th. 11 (weeks 1–4)
- PROF. P. LIPTON  
Induction. W. 12 (weeks 1–8) (*Mill Lane Lecture Room 1*)
- DR K. BROSNAN  
Philosophy of Biology. Th. 11 (weeks 5–8)

- DR E. ROBSON  
The Material Culture of Mathematics. Th. 10 (weeks 1–8)
- MS A. BREITENBACH AND MR S. JOHN  
Environmental Ethics and Science Policy. M. 2 (weeks 1–4)
- DR A. COHEN  
Theory and Practice in the Social Sciences. M. 2 (weeks 5–8)
- PROF. J. SECORD  
Science Communication. F. 3 (weeks 1–4)
- DR M. PETERSON  
Bioethics. F. 3 (weeks 5–8)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

**(Paper 6) History and Philosophy of Mind**

Course Organiser: Prof. J. Forrester (email: jpf11@cam.ac.uk)

PROF. J. FORRESTER

Primary Source. W. 2 (weeks 1–4)

PROF. J. FORRESTER

Freud, Psychoanalysis and the Twentieth Century. Th. 11 (weeks 1–8); W. 2 (weeks 5–8)

DR D. THOM

Eugenics and Psychology in the UK, 1869–1971. M. 2 (weeks 1–4)

DR M. SPREVAK

Thought and Computation. M. 2 (weeks 5–8)

**(Paper 7) Medicine from Antiquity to the Enlightenment**

Course Organisers: Dr L. Kassell (email:

ltk21@cam.ac.uk) and Dr E. Robson (email:

er264@cam.ac.uk)

DR L. TOTELIN

Primary Source. F. 12 (weeks 1–4)

DR R. FLEMMING, PROF. SIR GEOFFREY LLOYD AND DR C. SALAZAR

Medicine and Society in Greco-Roman Antiquity. F. 12 (weeks 5–8)

DR L. KASSELL, DR R. RALLEY AND DR M. SATCHELL

Medicine and Society, 1100–1700. Th. 3 (weeks 1–8)

PROF. M. KUSCH

Rule Following. W. 2 (weeks 1–8)

PROF. P. LIPTON

Topics in the Philosophy of Mind. F. 11 (weeks 1–8) (*Mill Lane Lecture Room 1*)

DR G. BERRIOS

History of Psychopathology and Psychiatry. Tu. 2 (weeks 5–8)

DR R. FLEMMING, PROF. SIR GEOFFREY LLOYD AND DR C. SALAZAR

The same continued. F. 12 (weeks 1–8)

DR L. KASSELL, DR R. RALLEY AND DR M. SATCHELL

The same continued. F. 2 (weeks 1–8)

MR P. JONES

Medicine and Communication, 1375–1640. Th. 2 (weeks 1–4)

DR S. KUSUKAWA

Renaissance Anatomy: The Body and the Book. Th. 2 (weeks 5–8)

**(Paper 8) Modern Medicine and Biomedical Sciences**

Course Organiser: Dr V. Heggie

DR V. HEGGIE

Primary Source. Tu. 2 (weeks 1–4)

DR V. HEGGIE

Making Modern Medicine. M. 12 (weeks 1–5); Tu. 2 (weeks 5–6); Th. 2 (weeks 1–5)

DR V. HEGGIE AND DR A. NATHOO

Medicine in the Twentieth Century. M. 12 (weeks 6–8); Tu. 2 (weeks 7–8); Th. 2 (weeks 6–8)

DR T. BUKLIJAS

Dissecting Anatomy. M. 12 (weeks 1–4)

PROF. J. FORRESTER

History of Psychiatry. M. 12 (weeks 5–8)

MS A. NATHOO

Medicine and the Media. Tu. 12 (weeks 1–4)

DR V. HEGGIE

Sport, Medicine and the Heart. Tu. 12 (weeks 5–8)

**(Paper 9) Images of the Sciences**

Course Organiser: Prof. N. Jardine (email:

nj103@cam.ac.uk)

PROF. N. JARDINE, MR N. TOSH AND MS H. MACDONALD

Primary Source. M. 10 (weeks 1–4)

PROF. N. JARDINE AND PROF. J. FORRESTER

Ideologies of Science. Tu. 10 (weeks 1–8); M. 10 (weeks 5–6)

DR M. FRASCA-SPADA, MR S. JOHN, PROF. N. JARDINE AND DR A. BREITNEBACH

Sources of Knowledge: Locke, Berkeley, Hume and Kant. Th. 12 (weeks 1–8)

PROF. N. JARDINE AND DR C. CHIMISSO

Histories of Science and their Uses. Tu. 3 (weeks 1–4); Th. 3 (weeks 1–8)

DR M. FRASCA-SPADA, MR S. JOHN, PROF. N. JARDINE AND DR A. BREITNEBACH

The same continued. Th. 12 (weeks 1–8)

Attention is drawn to courses announced by other authorities. Students are particularly advised to attend other relevant courses in the Faculties of History, Philosophy, and Social and Political Sciences.

DR N. WRIGHT

Latin for Beginners. M. Tu. Th. F. 5 (*Faculty of Classics*)

DR P. BURSILL-HALL

Topics in the History of Mathematics: Ancients to the Renaissance. W. F. 4 (*Room 9, Centre for Mathematical Sciences*)

DR R. BOAST, DR M. BRAVO AND DR R. DOUBLEDAY

Geographies of Science. Times to be announced (*Small Lecture Theatre, Department of Geography*)

DR N. WRIGHT

The same continued.

DR J. MARENBO

Avicenna and Aquinas on the Soul. M. 12 (*Faculty of Philosophy*)

DR P. BURSILL-HALL

Topics in the History of Mathematics: Renaissance to the Nineteenth Century. W. F. 4 (*Room 9, Centre for Mathematical Sciences*)

DR C. BOURNE

Concepts of Probability. Th. 10 (weeks 5–8) (*Faculty of Philosophy*)

DR N. WRIGHT

The same continued.

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

**MATERIALS SCIENCE AND METALLURGY**  
**PHYSICAL SCIENCES: HALF SUBJECT MATERIALS SCIENCE AND METALLURGY**

Course Organiser: Dr S. M. Best (email: PartII@msm.cam.ac.uk)  
 Course Website: www.msm.cam.ac.uk/teaching/PtIIAB/

A detailed timetable is available on the Department course website, as above.  
 Students offering Physical Sciences: Half Subject Materials Science and Metallurgy should consult with the Department over the courses they will take.

All lectures will be given in the *Seminar Room (T001)*

DR J. A. ELLIOTT AND DR P. D. BRISTOWE  
**C1** Modelling and Data Analysis. (Six lectures)  
 DR K. M. KNOWLES  
**C3** Mathematical Methods. (Six lectures)  
 DR P. A. MIDGLEY  
**C4** Tensor Properties. (Twelve lectures)  
 PROF. H. K. D. BHADESHIA  
**C6** Crystallography. (Nine lectures)  
 DR J. A. LITTLE  
**C9** Alloys (Nine lectures)  
 PROF. A. H. WINDLE  
**C10** Structure and Properties of Polymers. (Nine lectures)  
 DR C. RAE  
**C15** Fracture, Fatigue and Deformation (Twelve lectures)

**Speakers from Industry**

Details available from the Department website.

**Visit to Industry**

Details available from the Department website.

**Examples Classes**

Timetable available on the Department website.

**Practical Classes**

Details available from the Department website.

**Management and Language Options**

Details available from the Department website.

DR P. D. BRISTOWE  
**C5** Physical Properties. (Twelve lectures)  
 PROF. A. L. GREER  
**C7** Kinetics. (Nine lectures)  
 DR J. A. LITTLE  
**C8** Chemical Stability. (Nine lectures)  
 DR K. M. KNOWLES  
**C12** Plasticity and Deformation Processing.  
 (Nine lectures)  
 DR W. J. CLEGG  
**C13** Ceramics. (Nine lectures)  
 DR R. E. CAMERON  
**C14** Polymer Processing. (Six lectures)  
 DR R. V. KUMAR  
**C17** Heat and Mass Transfer. (Six lectures)

**Speakers from Industry**

Details available from the Department website.

**Visit to Industry**

Details available from the Department website.

**Examples Classes**

Timetable available on the Department website.

**Practical Classes and Projects**

Details available from the Department website.

**Management and Language Options**

Details available from the Department website.

DR E. R. WALLACH  
**C2** Selection of Materials. (Six lectures)  
 DR S. M. BEST  
**C11** Surfaces and Interfaces (Six lectures)  
 DR S. M. BEST  
**C18** Biomaterials. (Six lectures)

**Examples Classes**

Timetable available on the Department website.

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

## NEUROSCIENCE

## BIOLOGICAL AND BIOMEDICAL SCIENCES: MAJOR AND MINOR SUBJECT NEUROSCIENCE

Course Organiser: Dr John Rogers, (email: jhr11@cam.ac.uk)

Course website: <http://www.bio.cam.ac.uk/teaching/neuroscience/index.html>**Module N1: Developmental Neurobiology**

M.9, Th.9, F.10

Module Organiser: Prof. R. D. Keynes (rjk10@cam.ac.uk)

Venue:

PROF. M. BATE

Neurogenesis and patterning. (Six lectures, 4, 5, 8, 11, 12, 15 Oct.)

DR G. M. W. COOK AND PROF. C. HOLT

Axon guidance. (Four lectures, 18, 19, 22, 25 Oct.)

DR M. LANDGRAF

Synapse formation. (Three lectures, 26, 29 Oct., 1 Nov.)

DR J. ROGERS

Synapse elimination and neurotropic factors. (Two lectures, 2, 5 Nov.)

DR K. LEWIS

Development of spinal cord. (One lecture, 8 Nov.)

DR R. LIVESEY

Development of cerebral cortex. (Two lectures, 9, 12 Nov.)

PROF. W. A. HARRIS

Topographic map formation and tuning. (Three lectures, 15, 16, 19 Nov.)

PROF. E. B. KEVERNE

Genetics and evolution of brain development. (Three lectures, 22, 23, 26 Nov.)

**Module N2: Molecular Neuroscience**

M.10, W.9, F. 9

Module Organiser: Dr Zoltan Sarnyai (zs220@cam.ac.uk)

Venue: *Pharmacology Lecture Theatre*

DR R. D. MURRELL-LAGNADO

Voltage-gated Ion channels. (Five lectures, 5–15 Oct.)

DR S. CHAWLA

Regulation of Gene Transcription. (Two lectures, 17–19 Oct.)

DR B. BILLUPS

Glutamatergic Transmission. (Five lectures, 22–31 Oct.)

DR S. B. HLADKY

Cys-Loop Family of Ligand-gated Ion Channels. (Three lectures, 2–7 Nov.)

PROF. C. W. TAYLOR

Calcium Signalling (Three lectures, 9–14 Nov.)

DR J. M. EDWARDSON

Synaptic Mechanisms (Six lectures, 16–28 Nov.)

**Module N5: Neural Degeneration & Regeneration**

M.9, W.9, Th.9

Module Organiser: Dr J. H. Rogers

(jhr11@cam.ac.uk)

Venue:

DR A. J. MORTON

Neurodegenerative diseases (Four lectures, 17, 21, 23, 24 Jan.) *Shared with P2 Pharmacology, in Pharmacology lecture theatre*

DR R. TASKER

Damage to neurons: Ischaemia, excitotoxicity, and stroke (Four lectures, 28, 30, 31 Jan., 4 Feb.)

DR G. GARCIA-ALIAS

Spinal cord injury (Two lectures, 6, 7 Feb.)

DR J. ROGERS

Regeneration of axons (Four lectures, 11, 13, 14, 18 Feb.)

DR R. BARKER

Brain repair and neural grafting (Four lectures, 20, 21, 25, 27 Feb.)

DR S. PLOOARD

Neural stem cells and adult neurogenesis (Three lectures, 28 Feb., 3, 5 Mar.)

PROF. R. FRANKLIN

Glial degeneration and repair (Three lectures, 6, 10, 12 Mar.)

**Module N6: Central Mechanisms of Sensation & Behaviour**

Tu.9, Tu. 11, Th.10

Module Organiser: Dr R.H.S. Carpenter

(rhsc1@cam.ac.uk)

Venue:

DR D. J. TOLHURST

Higher processing of visual information (Four lectures, Tu. 11 (15 Jan.: *NOTE EARLY START*); Th. 10 (17 Jan.); Tu. 11 (22 Jan.); Th. 10 (24 Jan.)

DR R. PATTERSON

Central processing of auditory information (Four lectures, Tu. 9 &amp; 11 (29 Jan.); Th. 10 (31 Jan.); Tu. 9 (5 Feb.)

PROF. S. LAUGHLIN

Neural mechanisms of sensory and motor integration (Four lectures, Tu.11 (5 Feb.); Th. 10 (7 Feb.); Tu. 9 &amp; 11 (12 Feb.)

PROF. D. WOLPERT

Computational sensorimotor control (Three lectures, Th.10 (14 Feb.); Tu. 9 &amp; 11 (19 Feb.)

DR R. H. S. CARPENTER

Neurobiology of decision (Three lectures, Th. 10 (21 Feb.); Tu. 9 &amp; 11 (26 Feb.)

PROF. W. SCHULTZ

Neurobiology of reward (Three lectures, Th. 10 (28 Feb.); Tu. 9 &amp; 11 (4 Mar.)

DR A. ROBERTS

Neural mechanisms underlying executive control (Three lectures, Th. 10 (6 Mar.); Tu. 9 &amp; 11 (11 Mar.)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

**Module N3: Control of Action**

Tu.11, W.10, F.11

Module Organiser: Dr S. A. Edgley (sae1000@cam.ac.uk)

Venue:

VARIOUS LECTURERS (t.b.d.): Control of action (24 lectures)

DR S. A. EDGLEY

Cerebellum (Four lectures: Tu. 11, W. 10: 9, 10, 16, 17 Oct.)

PROF. R. LEMON

Corticospinal system (Four lectures: Tu. 11, Tu. 14: 23, 30 Oct.)

DR H. R. MATTHEWS

Long latency reflexes (Four lectures: F. 11, Tu. 11, W. 10: 2, 6, 7, 9 Nov.)

PROF. J. ROTHWELL

Basal ganglia (Four lectures: Tu. 11, Tu. 14: 13, 27 Nov.)

DR R. H. S. CARPENTER

Oculomotor controls (Four lectures: F. 11, Tu. 11, W. 10: 14, 16, 20, 21 Nov.)

*Plus journals clubs, to be scheduled***Module N4: Sensory Transduction**

Mon.12, Tue.9, Thur.10.

Module organiser: Dr. Hugh Matthews (hrm1@cam.ac.uk)

DR H. MATTHEWS

Vertebrate phototransduction (Five lectures) 4, 8, 9, 11, 15 Oct.

DR R. HARDIE

Invertebrate phototransduction (Four lectures) 16, 18, 22, 23 Oct.

DR B. HEDWIG

Insect hearing (Two lectures) 25, 29 Oct.

DR H. MATTHEWS

Muscle spindles (Two lectures) 30 Oct., 1 Nov.

PROF. P. MCNAUGHTON

Pain (Four lectures) 5, 6, 8, 12 Nov.

DR C. HACKNEY

Peripheral auditory system (Four lectures) 13, 15, 19, 20 Nov.

DR H. MATTHEWS

Olfactory transduction (Three lectures) 22, 26, 27 Nov.

**Module N7: Local Circuits & Neural Networks**

M.11, W.10, F.9

Module Organiser: Dr D.J. Parker

(djp27@cam.ac.uk)

Venue:

DR D. J. PARKER

Principles of network function/spinal cord networks (Four lectures, 18, 21, 23, 25 Jan.)

DR K. LEWIS

Molecular approaches to network organisation and function (Two lectures, 28, 30 Jan.)

PROF. S. LAUGHLIN

The design of local circuits (Four lectures, 1, 4, 6, 8 Feb.)

DR B. HEDWIG

Local circuit mechanisms in invertebrate model systems (Three lectures, 11, 13, 15 Feb.)

DR D. BURDAKOV

Hypothalamic networks (Three lectures, 18, 20, 22 Feb.)

DR I. M. WINTER

Brainstem auditory networks (Four lectures, 25, 27, 29 Feb., 3 Mar.)

DR H. P. C. ROBINSON

Cortical networks (Four lectures, 5, 7, 10, 12 Mar.)

**Module N8: Memory & Higher Functions**

M.10, Tu.10, F.10

Module Organiser: Dr T. Bussey

(tjb1000@cam.ac.uk)

Venue:

DR T. BUSSEY, DR L. SAKSIDA

Memory, Amnesia, Animal and Computational Models (Six lectures, 18, 21, 22, 25, 28, 29 Jan.)

DR J. LEE

Mechanisms of Cellular-level Consolidation and Reconsolidation (Three lectures, 1, 4, 5 Feb.)

DR T. BUSSEY

Emotional Memory (Two lectures, 8, 11 Feb.)

DR T. BUSSEY, DR L. SAKSIDA, DR B. J. MCCABE

Learning and Memory in Simple Systems (Four lectures, 12, 15, 18, 19 Feb.)

DR J. LEE, DR J. SIMONS, DR L. CLARK

Higher Cognitive Functions (Nine lectures, 22, 25, 26, 29 Feb., 3, 4, 7, 10, 11 Mar.)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

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## PATHOLOGY

## BIOLOGICAL AND BIOMEDICAL SCIENCES: MAJOR SUBJECT PATHOLOGY

Course Organiser: Dr A. Kelly (email: apk23@cam.ac.uk)  
 Course Website: www.path.cam.ac.uk

*All lectures will be given in the Department of Pathology unless otherwise stated*

**Introductory lecture**

All options. W. 3 (One lecture, 3 Oct.) *It is important that all students attend the introductory lecture*

**Option A: Cellular and Genetic Pathology** Tu. Th. Sa. 9

Option Organiser: Dr C. A. Sargent  
 (email: cas1001@cam.ac.uk) Tel. 33700

DR I. FURNER, DR D. GRIFFIN, DR S. BLOTT, DR C. SARGENT,  
 DR D. RUBINSZTEIN, DR D. R. SARGAN, DR A. MURREL,  
 DR A. PHILPOTT, AND DR M. HURLES

*N.B. Some lectures are held at 11.30 or 12 noon*

Part I: Genes, Genomes and Disease.

DR P. ELLIS, DR A. SHARKEY

Part II: Molecular Genetics and Pathology of  
 Reproduction.

DR P. EDWARDS, PROF. A. H. WYLLIE, PROF. M.-Q.  
 DU, PROF. V. P. COLLINS, DR A. BANNISTER, ,  
 DR H. LAMAN, DR R. HEKETH, DR SHIVJI,  
 DR S. TURNER, DR P. JONES, DR C. WATSON  
 AND PROF. M. A. STANLEY

Part III: Defects in Cellular Growth and  
 Differentiation: Cancer.

DR S. CHARNOCK-JONES  
 Part IV: Angiogenesis.

**Option B: Immunology** Tu. Th. 5, Sa. 10.15

Option Organiser: Dr N. Holmes (email:  
 nh106@cam.ac.uk) Tel: 33871

PROF. J. TROWSDALE, DR A. KELLY, DR P. LEHNER, DR N. GUY,  
 DR C. BRYANT, DR H. REYBURN, PROF. A. COOKE, DR  
 M. CLARK, DR L. MARTENSEN-BOPP, PROF. K. G. C.  
 SMITH, PROF. D. T. FEARON, DR N. HOLMES AND DR H.  
 SCHNEIDER

DR N. HOLMES, DR B. A. BLACKLAWS, DR J.  
 BONAME, DR P. MASTROENI, DR H.  
 REYBURN, DR D. B. PALMER, PROF. A.  
 GREEN, DR F. RANDOW, DR G. BUTCHER  
 AND DR A. MOFFETT

**Option C: Microbial and Parasitic Disease** M. W. F. 9

Option Organiser: Dr I. B. Kingston (email:  
 ibk1000@cam.ac.uk) Tel: 33330

DR R. HAYWARD, PROF. V. KORONAKIS AND DR G. FRASER  
 Bacterial Disease and Pathogenicity.

DR D. BROWN, DR V. KORONAKIS AND DR P. MASTROENI  
 Combating Bacterial Disease.

DR N. BROWN AND PROF. A. M. LEVER  
 Fungal Infections.

DR I. B. KINGSTON, DR J. AJIOKA, DR M. SHIRLEY,  
 DR C. PEACOCK AND DR. M. FIELD

Major Protozoal Diseases.

PROF. D. DUNNE, DR I. B. KINGSTON, DR E.  
 MICHAEL AND DR M. FIELD

Major Helminth Diseases.

DR M. BOOTH  
 Epidemiology.

DR I. B. KINGSTON AND DR H. DE KONING  
 Parasite Vaccines and Chemotherapy.

DR G. FRASER AND DR I. B. KINGSTON

**Journal Research Seminars**

DR I. B. KINGSTON AND DR J. W. AJIOKA

**Journal Research Seminars (10-1)**

**Project Seminars** Dates to be confirmed.

**Option D: Virology** M. W. F. 5

Option Organiser: Dr T. D. K. Brown (email:  
 tdkb@mole.bio.cam.ac.uk) Tel: 36917

DR T. D. K. BROWN, DR S. WYNNE, DR P. DIGARD, DR J. GRAY,  
 DR I. BRIERLEY, DR S. EFSTATHIOU AND DR J.  
 SINCLAIR

DR G. TURNER, DR B. A. BLACKLAWS, DR J.  
 BONAME, DR P. BORROW, DR S. EFSTATHIOU,  
 PROF. A. C. MINSON, DR P. DIGARD,  
 DR T. D. K. BROWN, DR J. C. STERLING,  
 DR H. BROWNE, DR P. D. MINOR,  
 DR G. K. DARBY, DR J. AJIOKA, DR J. GOG  
 AND DR P. STEVENSON

DR T. D. K. BROWN, DR P. DIGARD AND  
 DR S. EFSTATHIOU

**Option E: Dynamics of Infectious Disease** Tu. Th. 9, Th. 10

*Venue: Rm. FW26 William Gates Computer Laboratory  
 Building*

Option Organiser: Dr L. S. Tiley (email:  
 lst21@cam.ac.uk) Tel: 39554

DR I. BROWN, DR T. FOOKS, DR A. GRANT, PROF. T. HUMPREY,  
 DR D. KING, DR J. MCCAULEY, PROF. D. MASKELL,  
 DR J. MUMFORD, DR O. RESTIF, DR C. RUSSELL,  
 DR L. TILEY AND DR J. WOOD

DR M. BAYLIS, DR B. BLACKLAWS, DR M. BOOTH,  
 DR R. CLIFTON-HADLEY, DR A. DAVISON,  
 DR T. DREW, DR H. FIELD,  
 DR T. GOODCHILD, PROF. J. HEENEY,  
 DR P. MASTROE, DR P. MELLOR,  
 DR O. PYBUS, DR S. RYDER, PROF. J. SLATER,  
 DR K. SMITH AND DR L. TILEY

DR M. BAYLIS, DR T. J. MCKINLEY, DR S. SARGEN,  
 DR L. TILEY AND DR J. WOOD

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

## PHARMACOLOGY

## BIOLOGICAL AND BIOMEDICAL SCIENCES: MAJOR SUBJECT PHARMACOLOGY

Course Organiser: Dr R. D. Murrell-Lagnado E-mail: (rdm1003@cam.ac.uk) (MT) Prof. C. W. Taylor (cwt1000@cam.ac.uk) (L & ET)  
 Course Website: www.phar.cam.ac.uk/teaching/tea\_part2.html

The introductory session for students will be at 9 a.m., Wednesday, 3 Oct. in the *Lecture Theatre, Department of Pharmacology*. It is expected to last all morning with a break for coffee.

Lectures will be given in the *Lecture Theatre, Department of Pharmacology*, unless otherwise indicated.

## Systems Pharmacology

- DR C. R. HILEY  
 Cardiovascular Pharmacology. (Six lectures, 4–16 Oct.)  
 M. Tu. Th. 9
- DR J. KOENIG AND DR L. J. MACVINISH  
 Study Skills 1. (5 Oct. F. 10)
- DR M. A. BARRAND  
 Drug Delivery at the Blood Brain Barrier. (Three  
 lectures. 17–22 Oct.) M. 9, W. F. 10
- DR Z. SARNYAI  
 Pharmacology of Psychiatric Disorders. (Six lectures, 23  
 Oct.–8 Nov.) Tu. Th. 9
- DR J. KOENIG AND DR L. J. MACVINISH  
 Study Skills 2. (31 Oct. W. 10)
- PROF. M. J. WARING AND PROF. V. K. K. CHATTERJEE  
 Drugs, Receptors and DNA. (Six lectures 5–14 Nov. M.  
 9, W. F. 10, 15 Nov. Th. 11, 21 Nov. W. 10)
- DR L. J. MACVINISH  
 Pharmacology of Transporting Epithelia. (Four lectures,  
 12–19 Nov.) M. Tu. Th. 9
- DR F. H. MARSHALL  
 Drug Discovery. (Two Lectures, 20–22 Nov.) Tu. Th. 9

## Molecular and Cellular Pharmacology

- DR R. D. MURRELL-LAGNADO  
 Voltage-gated Ion channels. (Five lectures, 5–15 Oct.) M.  
 10, W. F. 9
- DR S. CHAWLA  
 Regulation of Gene Transcription. (Two lectures, 17–19  
 Oct.) W. F. 9
- DR B. BILLUPS  
 Glutamatergic Transmission. (Five lectures, 22–31 Oct.)  
 M. 10, W. F. 9
- DR S. B. HLADKY  
 Cys-Loop Family of Ligand-gated Ion Channels. (Three  
 lectures, 2–7 Nov.) M. 10, W. F. 9
- PROF. C. W. TAYLOR  
 Ca<sup>2+</sup> Signalling (Three lectures. 9–14 Nov.) M. 10, W. F. 9
- DR J. M. EDWARDSON  
 Synaptic Mechanisms (Six lectures, 16–28 Nov.) M. 10,  
 W. F. 9 (Venue for lecture 19 Nov. M. 10 to be  
 confirmed)

- DR M. A. BARRAND  
 Mechanisms of Drug Resistance. (Four  
 lectures. 17–29 Jan.) Th. 17 at 10, Tu. 22 at  
 9, Th. 24 at 10, Tu. 29 at 9
- DR A. J. MORTON  
 Neurodegenerative Diseases. (Six lectures.  
 17–30 Jan.) 17–28 Jan. M. W. Th. 9, 30  
 Jan. W. 10
- DR R. M. HENDERSON  
 Cholesterol and Diabetes. (Six lectures, 28  
 Jan.–8 Feb.) M. 10, W. F. 9
- DR L. HEISLER  
 Neurocircuitry Regulating Satiety. (Four  
 lectures, 29 Jan.–7 Feb.) Tu. 29 at 10, Th.  
 31 at 9, Tu. 5 at 9, Th. 7 at 10
- DR D. BURDAKOV  
 Sleep and Appetite. (Four lectures. 12–21 Feb.)  
 Tu. Th. 9
- PROF. D. M. F. COOPER  
 Signalling by Cyclic AMP. (Five lectures, 16–25  
 Jan.) W. 16 and F. 18 at 9, M. 21 and W. 23  
 at 10, F. 25 at 9
- DR L. RODERICK  
 Calcium Signalling and the Heart. (Two  
 lectures) 7 Feb. Th. 9, 12 Feb. Tu. 10
- PROF. C. W. TAYLOR  
 G proteins and g-protein Coupled Receptors.  
 (Four lectures, 8–15 Feb.) M. W. 9, F. 10
- PROF. R. F. IRVINE  
 Inositide Signalling. (Five lectures. 11–20 Feb.)  
 M. 10, W. 10, F. 9
- DR H. VAN VEEN  
 Molecular Aspects of Multidrug Transport.  
 (Five lectures. 18–27 Feb.) M. W. F. 9
- PROF. P. MCNAUGHTON  
 Nociception. (Four lectures. 29 Feb.–7 Mar.) M.  
 W. F. 9

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

## PHYSIOLOGY, DEVELOPMENT AND NEUROSCIENCE

## BIOLOGICAL AND BIOMEDICAL SCIENCES: MAJOR AND MINOR SUBJECT PHYSIOLOGY, DEVELOPMENT AND NEUROSCIENCE

Course Organiser: Dr S. O. Sage (email: sos10@cus.cam.ac.uk)  
 Course Website: www.pdn.cam.ac.uk/teaching/

The course consists of a series of workshops, lectures and seminars around a framework of modules.  
 Detailed timetables will be posted in the Department.

**Module N1: Developmental Neurobiology**

M. 9, Th. 9, F. 10

Module Organiser: Prof. R. D. Keynes (rjk10@cam.ac.uk)

PROF. M. BATE

Neurogenesis and patterning. (Six lectures, 4, 5, 8, 11, 12, 15 Oct.)

DR G. M. W. COOK AND PROF. C. HOLT

Axon guidance. (Four lectures, 18, 19, 22, 25 Oct.)

DR M. LANDGRAF

Synapse formation. (Three lectures, 26, 29 Oct., 1 Nov.)

DR J. ROGERS

Synapse elimination and neurotropic factors. (Two lectures, 2, 5 Nov.)

DR K. LEWIS

Development of spinal cord. (One lecture, 8 Nov.)

DR R. LIVESEY

Development of cerebral cortex. (Two lectures, 9, 12 Nov.)

PROF. W. A. HARRIS

Topographic map formation and tuning. (Three lectures, 15, 16, 19 Nov.)

PROF. E. B. KEVERNE

Genetics and evolution of brain development. (Three lectures, 22, 23, 26 Nov.)

**Module N2: Molecular Neuroscience**

M. 10, W. F. 9

Module organisers: Dr Zoltan Sarnyai

(zs220@cam.ac.uk), Dr Lesley MacVinish

(ljm1000@cam.ac.uk) (Dept. of Pharmacology)

*Pharmacology Lecture Theatre* (Also offered within Part II Pharmacology)

DR R. D. MURRELL-LAGNADO

Voltage-gated Ion channels. (Five lectures, 5–15 Oct.) M. 10, W. F. 9

DR S. CHAWLA

Regulation of Gene Transcription. (Two lectures, 17–19 Oct.) W. F. 9

DR B. BILLUPS

Glutamatergic Transmission. (Five lectures, 22–31 Oct.) M. 10, W. F. 9

DR S. B. HLADKY

Cys-Loop Family of Ligand-gated Ion Channels. (Three lectures, 2–7 Nov.) M. 10, W. F. 9

PROF. C. W. TAYLOR

Ca<sup>2+</sup> Signalling (Three lectures, 9–14 Nov.) M.10, W. F. 9

DR J. M. EDWARDSON

Synaptic Mechanisms (Six lectures, 16–28 Nov.) M.10, W. F. 9 (Venue for lecture 19 Nov. M. 10 to be confirmed)

**Module N5: Neural Degeneration and Regeneration**

M. 9, W. 9, Th. 9

Module Organiser: Dr J. H. Rogers  
(jhr11@cam.ac.uk)

DR A. J. MORTON

Neurodegenerative diseases (Four lectures, 17, 21, 23, 24 Jan.) *Shared with P2 Pharmacology, in Pharmacology Lecture Theatre*

DR R. TASKER

Damage to neurons: Ischaemia, excitotoxicity, and stroke (Four lectures, 28, 30, 31 Jan., 4 Feb.)

DR G. GARCIA-ALIAS

Spinal cord injury (Two lectures, 6, 7 Feb.)

DR J. ROGERS

Regeneration of axons (Four lectures, 11, 13, 14, 18 Feb.)

DR R. BARKER

Brain repair and neural grafting (Four lectures, 20, 21, 25, 27 Feb.)

DR S. POLLARD

Neural stem cells and adult neurogenesis (Three lectures, 28 Feb., 3, 5 Mar.)

PROF. R. FRANKLIN

Glial degeneration and repair (Three lectures, 6, 10, 12 Mar.)

**Module N6: Central Mechanisms of Sensation and Behaviour**

Tu. 9, Tu. 11, Th. 10

Module Organiser: Dr R. H. S. Carpenter  
(rhsc1@cam.ac.uk)

DR D. J. TOLHURST

Higher processing of visual information (Four lectures, Tu. 11 (15 Jan.); Th. 10 (17 Jan.); Tu. 11 (22 Jan.); Th. 10 (24 Jan.)

DR R. PATTERSON

Central processing of auditory information (Four lectures, Tu. 9 and 11 (29 Jan.); Th. 10 (31 Jan.); Tu. 9 (5 Feb.)

PROF. S. LAUGHLIN

Neural mechanisms of sensory and motor integration (Four lectures, Tu.11 (5 Feb.); Th. 10 (7 Feb.); Tu. 9 and 11 (12 Feb.)

PROF. D. WOLPERT

Computational sensorimotor control (Three lectures, Th. 10 (14 Feb.); Tu. 9 and 11 (19 Feb.)

DR R. H. S. CARPENTER

Neurobiology of decision (Three lectures, Th. 10 (21 Feb.); Tu. 9 and 11 (26 Feb.)

PROF. W. SCHULTZ

Neurobiology of reward (Three lectures, Th. 10 (28 Feb.); Tu. 9 and 11 (4 Mar.)

DR A. ROBERTS

Neural mechanisms underlying executive control (Three lectures, Th. 10 (6 Mar.); Tu. 9 and 11 (11 Mar.)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

**Module N3: Control of Action**Tu. 11, W. 10, F. 11 *unless otherwise stated*

Module Organiser: Dr S. A. Edgley (sae1000@cam.ac.uk)

DR S. A. EDGLEY

Cerebellum (Four lectures, 9, 10, 16, 17 Oct.)

PROF. R. N. LEMON

Corticospinal System (Four lectures, Tu. 11 and 2 (23 Oct.); Tu. 11 and 2 (30 Oct.))

DR H. R. MATTHEWS

Long Latency Reflexes (Four lectures, 2, 6, 7, 9 Nov.)

DR S. A. EDGLEY AND DR H. R. MATTHEWS

Journal Club: Cortex Long Latency Reflexes (One session, 12 Nov.)

PROF. J. C. ROTHWELL

Basal Ganglia (Four lectures, Tu. 11 and 2 (13 Nov.); Tu. 11 and 2 (27 Nov.))

DR R. H. S. CARPENTER

Oculomotor Control (Four lectures, 14, 16, 20, 21 Nov.)

DR S. A. EDGLEY AND DR R. H. S. CARPENTER

Journal Club: Cerebellum Eye Movement (One session, 26 Nov.)

**Module N4: Sensory Transduction**

M. 12, Tu. 9, Th. 10.

Module organiser: Dr Hugh Matthews  
(hrm1@cam.ac.uk)

DR H. MATTHEWS

Vertebrate phototransduction (5 lectures) Oct. 4, 8, 9, 11, 15.

PROF. R. HARDIE

Invertebrate phototransduction (4 lectures) Oct. 16, 18, 22, 23.

DR B. HEDWIG

Insect hearing (2 lectures) Oct. 25, 29.

DR H. MATTHEWS

Muscle spindles (2 lectures) Oct. 30, Nov. 1.

PROF. P. MCNAUGHTON

Pain (4 lectures) Nov. 5, 6, 8, 12.

PROF. R. FETTIPLACE AND DR C. HACKNEY

Peripheral auditory system (4 lectures). Nov. 13, 15, 19, 20.

DR H. MATTHEWS

Olfactory transduction (3 lectures) Nov. 22, 26, 27.

**Module P1: Cellular Physiology**

M. 11, Tu. 10, W. 9

Module Organiser: Dr S. O. Sage (sos10@cam.ac.uk)

DR V. L. LEW

Cellular Calcium (Two lectures, 8, 9 Oct.)

DR A. HARPER AND DR S. O. SAGE

Calcium Signalling (Five lectures, 10, 15, 16, 17, 22 Oct.)

PROF. C. L-H. HUANG

Voltage Gated Calcium Channels (One lecture, 23 Oct.)

DR A. N. OTHER

Patch Clamping (One lecture, 24 Oct.)

DR R. WHITE

Molecular Techniques (One lecture, 29 Oct.)

PROF. R. C. THOMAS

Cellular pH (Three lectures, 30, 31 Oct. 5 Nov.)

DR O. LARINA

pH (Two lectures, 6, 7 Nov.)

PROF. C. L-H. HUANG

Excitation-Contraction Coupling (Two lectures, 12, 13 Nov.)

**Module N7: Local Circuits and Neural Networks**

M. 11, W. 10, F. 9

Module Organiser: Dr D. J. Parker  
(djp27@cam.ac.uk)

DR D. J. PARKER

Principles of network function/spinal cord networks (Four lectures, 18, 21, 23, 25 Jan.)

DR K. LEWIS

Molecular approaches to network organisation and function (Two lectures, 28, 30 Jan.)

PROF. S. LAUGHLIN

The design of local circuits (Four lectures, 1, 4, 6, 8 Feb.)

DR B. HEDWIG

Local circuit mechanisms in invertebrate model systems (Three lectures, 11, 13, 15 Feb.)

DR D. BURDAKOV

Hypothalamic networks (Three lectures, 18, 20, 22 Feb.)

DR I. M. WINTER

Brainstem auditory networks (Four lectures, 25, 27, 29 Feb., 3 Mar.)

DR H. P. C. ROBINSON

Cortical networks (Four lectures, 5, 7, 10, 12 Mar.)

**Module N8: Memory and Higher Functions**

M. 10, Tu. 10, F. 10

Module Organiser: Dr T. Bussey  
Venue:

DR T. BUSSEY, DR L. SAKSIDA

Memory, Amnesia, Animal and Computational Models (Six lectures, 18, 21, 22, 25, 28, 29 Jan.)

DR J. LEE

Mechanisms of Cellular-level Consolidation and Reconsolidation (Three lectures, 1, 4, 5 Feb.)

DR T. BUSSEY

Emotional Memory (Two lectures, 8, 11 Feb.)

DR T. BUSSEY, DR L. SAKSIDA, DR B. J. MCCABE

Learning and Memory in Simple Systems (Four lectures, 12, 15, 18, 19 Feb.)

DR J. LEE, DR J. SIMONS, DR L. CLARK

Higher Cognitive Functions (Nine lectures, 22, 25, 26, 29 Feb., 3, 4, 7, 10, 11 Mar.)

**Module P6: Development: Cell Differentiation and Organogenesis**

M. 5, W. 5, F. 5

Module Organisers: Dr N. Brown  
(nb117@mole.bio.cam.ac.uk) and Dr H. Skaer  
(hs17@cam.ac.uk)  
(Interdepartmental Course with Zoology)

DR S. BRAY, DR N. BROWN, DR H. SKAER, PROF. A. SURANI, DR C. BAKER, DR P. SCHOFIELD AND OTHERS

(Twenty-four lectures and 6 seminars)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

DR H. P. C. ROBINSON  
Synaptic Mechanisms (Two lectures, 14, 19 Nov.)

DR D. PARKER  
Synaptic and Metaplasticity (Three lectures, 20, 21, 26 Nov.)

DR J. FRASER  
Cellular Modelling (Two lectures, 27, 28 Nov.)

**Module P2: Early development and Assisted Reproductive Technologies**

M. 2, Tu. 11, F. 9  
Module Organiser: Prof. M. H. Johnson (mhj21@cam.ac.uk)

DR A. MOFFET AND PROF. G. BURTON  
Why trophoblast is important: what happens when it doesn't work? (Six sessions, M. 2 (8 Oct.); Tu. 11 (9 Oct.); F. 9 (12 Oct.); Tu. 11 (16 Oct.); F. 9 (19 Oct.); M. 2 (22 Oct.))

PROF. M. H. JOHNSON  
Fecundity, Fertility and Sub-fertility (One Session, M. 2 (29 Oct.))

The IVF/ICSI treatment cycle: what's involved? (Two sessions, Tu. 11 (30 Oct.); F. 9 (2 Nov.))  
Fertilisation and early development, and what makes a "good" embryo (Three sessions, M. 3 (5 Nov.); Tu. 11 (6 Nov.); F. 9 (9 Nov.))

DR A. SHARKEY  
Mechanisms of implantation (Two sessions, M. 2 (12 Nov.); Tu. 11 (13 Nov.))  
New treatments for infertility. New approaches to contraception (One session, F. 9 (16 Nov.))

DR VIVIENNE NATHANSON  
Law, ethics and reproduction (One session, M. 2 (19 Nov.))

PROF. M. H. JOHNSON  
Why state interference in reproduction? (One session, Tu. 11 (20 Nov.))

PROF. P. BRAUDE  
Preimplantation genetic diagnosis – science and ethics collide (One session, M. 2 (26 Nov.))

**Module P3: Fetal and Placental Physiology**

M. 12, Th. 10, F. 12  
Module Organiser: Dr A. J. Forhead (ajf1005@cam.ac.uk)

PROF. G. BURTON  
Placental development and function (Three lectures, 4, 5, 8 Oct.)

DR S. K. L. ELLINGTON  
Early development: effects of oxygen and glucose (Three lectures, 11, 12, 15 Oct.)

PROF. A. L. FOWDEN  
Growth and metabolism of the fetus (Four lectures, 18, 19, 22, 25 Oct.)

DR M. CONSTANCIA  
Role of imprinting in feto-placental development (One lecture, 26 Oct.)

DR A. J. FORHEAD  
Development of fetal organs (Three lectures, 29 Oct., 1, 2 Nov.)

PROF. A. L. FOWDEN  
Development of the fetal adrenal gland (One lecture, 5 Nov.)

DR A. J. FORHEAD  
Development of the fetal thyroid gland (One lecture, 8 Nov.)

PROF. G. BURTON, PROF. A. L. FOWDEN, DR A. J. FORHEAD  
Seminar on fetal growth (Two Seminars, Group 1: 9 Nov.; Group 2: 12 Nov.)

DR A. J. FORHEAD  
Fetal maturation in preparation for birth (One lecture, 15 Nov.)

DR A. J. FORHEAD, DR S. OZANNE  
Intrauterine programming of adult Pathophysiology (Two lectures, 16, 22 Nov.)

DR D. A. GIUSSANI  
Mechanisms of parturition (One lecture, 19 Nov.)  
Cardiovascular responses to acute and chronic stress in utero (Three lectures, 23, 26, 29 Nov.)  
Fetal breathing movements (One lecture, 30 Nov.)

**Module P7: Genomics and the Future of Medicine**

Th. 2  
Module Organiser: Dr R. White (rw108@cam.ac.uk)

(Eight Seminars: 17, 24, 31 Jan., 7, 14, 21, 28 Feb., 6 Mar)

**Module P8: Systems and Clinical Physiology**

M. 11, W. 11, F. 11  
Module Organiser: Dr S. O. Sage (sos10@cam.ac.uk)

DR S. O. SAGE  
Osmoregulation (Three lectures, 18, 21, 23 Jan.)

Renal Autoregulation (Two lectures, 25, 28 Jan.)

DR J. FIRTH  
Acute Renal Failure (Two lectures, 30 Jan., 1 Feb.)

DR J. BRADLEY  
Chronic Renal Failure (Two lectures, 4, 6 Feb.)

PROF. J. COMPSTON  
Bone Physiology (Two lectures, 8, 11 Feb.)

MR I. SABIR  
Cardiac Arrhythmias (Two lectures, 13, 15 Feb.)

DR N. W. MORRELL  
Pulmonary Circulation (Two lectures, 18, 20 Feb.)

PROF. D. B. DUNGER  
Diabetes Mellitus (Two lectures, 27, 29 Feb.)

DR G. S. H. YEO  
Genetics of Obesity (Three lectures, 3, 5, 7 Mar.)

DR J. ROCHFORD  
Adipogenesis and Lipodystrophy (Two lectures, 10, 12 Mar.)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

**Module P4: Development: Patterning the Embryo**

M. 11, Tu. 12, F. 11

Module Organiser: Dr R. J. Adams (rja46@cam.ac.uk)  
and Dr H. Skaer (hs17@cam.ac.uk)  
(Interdepartmental Course with Zoology)

DR R. WHITE, DR N. BROWN, PROF. P. SIMPSON, DR H. SKAER,  
DR R. ADAMS, DR B. SANSON AND OTHERS  
(Twenty-four lectures and 6 seminars)

**Module P5: Sex, Gender and Sexuality**

M. 11, Tu. 10, W. 10

Module Organiser: Prof. M. H. Johnson (mhj21@cam.ac.uk)

DR K. LEWIS

Sex, Gender and Sexuality: Introductions and Paper  
Reading (One session, Tu. 2 (9 Oct.))

DR P. SCHOFIELD

Evolution and genetics of sex; asexual versus sexual  
reproduction; reproductive strategies intra- and  
inter-sexual conflicts and genomic imprinting (Four  
sessions, W. 10 (10 Oct.); M. 11 (15 Oct.); Tu. 10 (16  
Oct.); W. 10 (17 Oct.))

DR P. SCHOFIELD AND PROF. M. H. JOHNSON

Journal Club (One session, Tu. 2 (23 Oct.))

PROF. M. H. JOHNSON

Sex determination, sex differentiation and intersex  
conditions (Three sessions, W. 10 (24 Oct.); M. 11  
(29 Oct.) W. 10 (31 Oct.))

DR L. DE MEZA

Sexual Health and Sex Education (One session, Tu. 2 (30  
Oct.))

PROF. M. H. JOHNSON AND DR K. LEWIS

Gender (One session, Tu. 2 (6 Nov.))

DR A. ROBERTS

Brain imaging, gender and sexuality (One session, W. 10  
(7 Nov.))

PROF. M. H. JOHNSON AND DR K. LEWIS

Journal Club: Gender (One session, M. 11 (12 Nov.))

DR Z.-J. PLAYDON

The politics and history of gender and sexuality (One  
session, Tu. 2 (13 Nov.))

PROF. M. H. JOHNSON AND DR K. LEWIS

Student Presentations (One session, F. 9 (30 Nov.))

**Module N9: Research Skills in Neuroscience**

W. 3, Th. 3

Module Organiser: Dr A. C. Roberts (acr4@cam.ac.uk)

DR A. ROBERTS

Introduction to module (One lecture, 4 Oct.)

PROF. C. HOLT AND PROF. R. KEYNES

Workshop 1 (Two lectures, 10, 11 Oct.)

Journal club/Supervision for workshop 1 (One lecture,  
17 Oct.)

DR D. PARKER AND PROF. W. A. HARRIS

Workshop 2 (Two lectures, 31 Oct. 1 Nov.)

Journal club/Supervision for workshop 2 (One lecture, 7  
Nov.)

DR D. J. TOLHURST AND DR S. A. EDGLEY

Workshop 3 (Two lectures, 21, 22 Nov.)

**Module N9: Research Skills in Neuroscience**

Tu. 3, W. 3

Module Organiser: Dr A. C. Roberts  
(acr4@cam.ac.uk)

DR D. J. TOLHURST AND DR S. A. EDGLEY

Journal club/Supervision for workshop 3 (One  
lecture, 16 Jan.)

DR A. ROBERTS AND PROF. W. SCHULTZ

Workshop 4 (Two lectures, 29, 30 Jan.)

Journal club/Supervision for workshop 4 (One  
lecture, 5 Feb.)

DR H. CLARKE AND DR S. WALKER

Workshop 5 (Two lectures, 19, 20 Feb.)

Journal club/Supervision for workshop 5 (One  
lecture, 26 Feb.)

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

## PLANT SCIENCES

## BIOLOGICAL AND BIOMEDICAL SCIENCES: MAJOR SUBJECT PLANT SCIENCES

Course Organiser: Prof. Howard Griffiths (email: hg230@cam.ac.uk)

Module Organisers appear below. E-mail: firstname.surname@plantsci.cam.ac.uk unless otherwise specified

Course Website: www.plantsci.cam.ac.uk/teaching/psii/index.html

All lectures take place in *the Seminar Room, Department of Plant Sciences* unless otherwise stated

The Biological and Biomedical Sciences (Major Subject Plant Sciences) course consists of lectures from the modules below. Students can offer either Cellular Plant Sciences (modules M1, M4, L1 and L4), or Ecological Plant Sciences (modules M3 and either M1 or Zoology M3; and L2, Zoology L2).

**Module M1: Frontiers in Plant-Microbe Interactions**

Module organiser: Dr John Carr

DR J. P. CARR, DR K. JOHNSTONE AND DR D. J. BAILEY  
M. W. F. 12 (Twenty-four lectures, beginning 5 Oct.)**Module M2: Plant Metabolism**

Module organiser: Prof. Alison Smith

DR J. M. HIBBERD, PROF. A. G. SMITH, PROF. J. NAPIER, DR P.  
DUPREE AND PROF. J. C. GRAY  
M. W. F. 10 (Twenty-four lectures, beginning 5 Oct.)**Module M3: Dynamics, History and Future of Vegetation**

Module organiser: Prof. Howard Griffiths

PROF. H. GRIFFITHS, DR D. A. COOMES AND PROF. O.  
RACKHAM  
M. F. 9 Tu. 10 (Twenty-four lectures, beginning 5 Oct.)**Module M4: Plant Signalling Networks**

Module organiser: Dr Alex Webb

DR J. M. DAVIES, DR A. A. R. WEBB AND DR A. DODD  
Tu. W. Th. 9 (Twenty-four lectures, beginning 4 Oct.)**Module L1: Development of Plants and Fungi**

Module organiser: Dr Jim Haseloff

DR J. HASELOFF, DR B. J. GLOVER, PROF. L. DOLAN  
AND DR A. N. OTHER  
M. W. F. 9 (Twenty-four lectures, beginning  
18 Jan.)**Module L2: Plant Responses to the Environment**

Module organiser: Dr Ed Tanner

DR E. V. J. TANNER, PROF. H. GRIFFITHS, DR J. M.  
HIBBERD AND DR D. A. COOMES  
M. W. F. 10 (Twenty-four lectures, beginning  
18 Jan.)**Module L3: Plant Genes and Organelles**

Module organiser: Prof. John Gray

PROF. A. G. SMITH, DR C. HOWE, PROF. J. C. GRAY,  
DR K. LILLEY AND DR P. DUPREE  
Tu. Th. 10, W 11 (Twenty-four lectures,  
beginning 17 Jan.)**Module L4: Frontiers in Microbial Physiology and Ecology**

Module organiser: Dr Keith Johnstone

DR K. JOHNSTONE, DR A. TUNNAcliffe, PROF. A.  
G. SMITH, DR J. BALK AND PROF. H.  
GRIFFITHS  
M. W. F. 12 (Twenty-four lectures, beginning  
18 Jan.)

The modules below may also be offered in Part II Plant Sciences (Part II Zoology modules). All lectures take place in *the Main Lecture Theatre, Department of Zoology*

**Aquatic Ecology**

Module organiser: Dr D. Aldridge

DR D. ALDRIDGE, DR M. BROOKE, DR R. BARNES AND PROF.  
A. CLARKE  
M. W. F. 11 (Twenty-four lectures, beginning 5 Oct.)**Population Biology***Interdepartmental Module*

Module organiser: Dr A. Manica

DR A. MANICA, DR C. RUSSELL, DR D. SMITH, DR D. COOMES,  
DR W. AMOS AND DR R. JOHNSTONE  
M. W. F. 5 (Twenty-four lectures, beginning 5 Oct.)**Conservation Biology***Interdepartmental Module*

Module organiser: Prof. A. Balmford

DR M. BROOKE, DR I. HODGE, DR W. AMOS, DR D.  
COOMES, DR R. GREEN, DR E. TANNER, DR  
J. O'SULLIVAN AND PROF. A. BALMFORD  
M. W. F. 4 (Twenty-four lectures, beginning 18  
Jan.)**Behavioural Ecology***Department of Zoology*

Module organiser: Dr R. A. Johnstone

PROF. N. B. DAVIES, DR R. JOHNSTONE, DR R.  
KILNER, PROF. T. H. CLUTTON-BROCK AND  
DR W. FOSTER  
Tu. Th. Sa. 10 (Twenty-four lectures,  
beginning 17 Jan.)

The following non-examined module is compulsory in Part II Plant Sciences:

**Statistics for Part II Biologists**

DR B. J. MCCABE

(1 Oct.) M. 9 and 2, M. Tu. W. Th. F. 2 (Ten lectures,  
1–11 Oct.) *Elementary Lecture Theatre, Department  
of Zoology**Please note early start of course.***Practical work**(Ten classes) M. W. F. 10–12 or 3–5 (1, 3, 5 Oct.); M. W. F.  
3–5 (8, 10, 12, 15 Oct.) *The Titan Teaching Rooms,  
New Museums Site**Please note early start of course*

## NATURAL SCIENCES TRIPOS, PART II (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

## PSYCHOLOGY

## BIOLOGICAL AND BIOMEDICAL SCIENCES: MAJOR SUBJECT PSYCHOLOGY

Course Organiser: Professor A. Dickinson (email: ad15@cam.ac.uk)  
 Course Website: <http://teaching.psychol.cam.ac.uk/>

Lectures will be held in the *Lecture Theatre, Department of Experimental Psychology* unless otherwise stated

PROF. T. W. ROBBINS

General Introduction. Th. 5 (One lecture, 4 Oct.)

DR M. R. F. AITKEN

Statistics. W. F. 2 (Six lectures, 10–26 Oct.)

Practical Classes. M. 2–4 (Three classes, 15–29 Oct.),

*Physiology Lecture Theatre 3*

Advanced Statistics. W. F. 2 (Four lectures, 14–23 Nov.)

Practical Classes. M. 2–4 (Two classes, 19 Nov., 26 Nov.)

*Physiology Lecture Theatre 3***Module A1: Visual Perception and Cognition**

DR G. J. DAVIS

M. 9 (Eight lectures, 8 Oct.–26 Nov.)

PROF. J. D. MOLLON

M. 5 (Eight lectures, 8 Oct.–26 Nov.)

**Module A2: Auditory and Speech Perception**

PROF. B. C. J. MOORE

Tu. W. 9 (Sixteen lectures, 9 Oct.–28 Nov.)

**Module A3: Comparative Psychology of Learning and Cognition**

PROF. N. S. CLAYTON AND PROF. A. DICKINSON

M. Tu. 12, F. 9 (Twenty-four lectures, 5 Oct.–27 Nov.)

**Module B1: Motivation and Psychopathology**

PROF. B. J. EVERITT AND PROF. T. W. ROBBINS

M. 10, W. 11 (Fourteen lectures, 8 Oct.–28 Nov.)

**Module C1: Developmental Psychology**

DR J. RUSSELL

F. 10 (Eight lectures, 5 Oct.–23 Nov.)

**Module C2: Atypical Psychology**

DR K. C. PLAISTED AND DR G. FAIRCHILD

F. 12 (Eight lectures, 5 Oct.–23 Nov.)

PROF. S. BARON-COHEN

Th. 9 (Eight lectures, 11 Oct.–29 Nov.)

DR E. WEISBLATT

Th. 5 (Four meetings, 1–22 Nov.)

DR L. BROSAN

W. 5 (Four lectures, 7–28 Nov.)

**Module C4: Individual Differences**

PROF. N. J. MACKINTOSH AND DR K. C. PLAISTED

Tu. Th. 10 (Sixteen lectures, 9 Oct.–29 Nov.)

DR L. CLARK

M. 11 (Four lectures, 5–26 Nov.)

PROF. M. P. HAGGARD

Data Analysis. Th. 2 (Two classes, 24, 31 Jan.)

PROF. J. D. MOLLON

Writing a Project Report. Th. 2 (One class,  
7 Feb.)

DR M. R. F. AITKEN

Experimental Design. Th. 2 (One class, 13 Mar.)

**Module A1: Visual Perception and Cognition**

PROF. J. D. MOLLON

M. 9 (Eight lectures, 14 Jan.–4 Feb., 18  
Feb.–10 Mar.)**Module A2: Auditory and Speech Perception**

DR J. I. ALCÁNTARA

W. 9 (Eight lectures, 16 Jan.–6 Feb., 20 Feb.–12  
Mar.)**Module A4: Human Memory and Decisions**

DR M. R. F. AITKEN ET AL.

M. W. 11, Tu. 12 (Twenty-four lectures, 14  
Jan.–6 Feb., 18 Feb.–12 Mar.)**Module B1: Motivation and Psychopathology**

PROF. B. J. EVERITT

W. 10 (Six lectures, 23 Jan.–6 Feb., 20 Feb.–5  
Mar.)

DR P. FLETCHER

Th. 5 (Four lectures, 21 Feb.–13 Mar.)

**Module B2: Memory and Higher Functions**

DR T. J. BUSSEY ET AL.

M. Tu. F. 10 (Twenty-four lectures, 18 Jan.–11  
Mar.) *Physiology Main Lecture Theatre***Advanced Topics in Cognitive Neuroscience**

DR T. J. BUSSEY ET AL.

Tu. 2 (Eight seminars, 15 Jan.–5 Feb., 19  
Feb.–11 Mar.)**Module B3: Language**

DR M. MIOZZO

M. 12, Th. 9 (Sixteen lectures, 14 Jan.–7 Feb.,  
18 Feb.–13 Mar.)

PROF. L. K. TYLER, DR M. MIOZZO AND DR F.

PULVERMÜLLER

M. 5 (Eight lectures, 14 Jan.–4 Feb., 18  
Feb.–10 Mar.)**Module C1: Developmental Psychology**

DR J. STEVENSON-HINDE AND PROF. R. HINDE

Tu. W. 5 (Eight lectures, 15 Jan.–6 Feb.)

DR J. RUSSELL

F. 11 (Eight lectures, 18 Jan.–8 Feb., 22  
Feb.–14 Mar.)**Module C4: Individual Differences**

PROF. J. D. MOLLON

F. 9 (Four lectures, 18 Jan.–8 Feb.)

Attention is drawn to lectures organised by the Faculty of Social and Political Sciences for the Paper Psy 1 (Social Psychology) given for Parts IIA and IIB of the Social and Political Sciences Tripos, Tu. 12 and 2 throughout Michaelmas Term and Lent Term.