

NATURAL SCIENCES TRIPOS, PART IA (continued) AND PART IB

MICHAELMAS 2007

LENT 2008

EASTER 2008

QUANTITATIVE BIOLOGY

Course Organiser: Dr A. Manica (email: a.manica@zoo.cam.ac.uk)
 Course Website: www.quns.cam.ac.uk/qb/

Quantitative Biology is intended for those students who have studied Mathematics at GCE A-level or its equivalent. It does not provide a qualification for offering Mathematics in Part IB of the Natural Sciences Tripos. New material comprising the course syllabus will be presented in the Tuesday and Thursday lectures. Additional worked examples, together with revision to aid the transition from GCE A-level, will be presented in the Saturday lectures. There will be no more than six Saturday lectures during the Michaelmas and Lent Terms and three in the Easter Term.

Lectures will be held in the *Large Lecture Theatre, Department of Plant Sciences, Computer practicals and Examples classes in the Titan Teaching Room, New Museum Site, unless otherwise stated*

Lectures. Tu. Th. 9

A. N. OTHER

Introduction to the Growth and Decline of Populations.
 (Ten lectures, 4 Oct. – 6 Nov.)

DR J. LUDLAM

Physiological Modeling. (Six lectures, 8–27 Nov.)

MR J. J. TRAPP

Introduction to Modeling of Interacting
 Populations. (Seven lectures, 17 Jan. – 7
 Feb.)

DR A. MANICA

Introduction to Statistical Methods. (Nine
 lectures, 12 Feb. – 11 Mar.)

DR R. JOHNSTONE

Optimisation and Game Theory. (Four
 lectures, 24 Apr. – 6 May)

DR J. GOG

Interacting Populations: Ecological
 Applications. (Four lectures, 8–20 May)

Supplementary lectures. S. 9

These lectures are to aid the transition from A level, and to present worked examples from the syllabus.

Examples classes and Computer Practicals. Th. 2–3.15, 3.30–4.45 or 4.45–6

Students will be registered electronically for all practical courses.

A. N. OTHER, DR J. LUDLAM AND DR R. JOHNSTONE

MR J. J. TRAPP, DR R. JOHNSTONE AND DR A.
MANICA

DR R. JOHNSTONE, DR J. GOG

Practical Work. Students will be registered electronically for all practical courses.

PART IB

ANIMAL BIOLOGY

Course Organiser: Dr B. Hedwig (email: bh202@cam.ac.uk)
 Course Website: www.zoo.cam.ac.uk/degree/1banimal/index.html

Candidates who intend to read Part II Zoology and who have not taken Evolution and Behaviour are recommended to attend one of the Easter Vacation Field Courses (if running). Details are posted in the Laboratory.

Lectures will take place at the *Main Lecture Theatre Department of Zoology M. W. F. 11*

PROF. N. B. DAVIES AND DR R. KILNER

Behaviour and Ecology. (Twelve lectures, beginning
 5 Oct.)

PROF. S. B. LAUGHLIN AND PROF. M. BURROWS

Brain and Behaviour. (Twelve lectures, beginning 2 Nov.)

DR W. FEDERLE AND DR W. A. FOSTER

Adaptation and Evolution: Insect Biology.
 (Twelve lectures, beginning 18 Jan.)

PROF. J. A. CLACK AND DR R. ASHER

Adaptation and Evolution: Vertebrate
 Evolutionary Biology. (Twelve lectures,
 beginning 15 Feb.)

DR R. A. JOHNSTONE AND DR N. I. MUNDY

Evolutionary Principles. (Twelve lectures,
 beginning 23 Apr.)

Note the early start of this course.

Practical work. Students will be expected to do four hours practical work per week between 12 and 5 on Wednesdays or 12 and 5 on Thursdays. Students should register for all biological practical courses on W. 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site.*

NATURAL SCIENCES TRIPOS, PART IB (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

BIOCHEMISTRY AND MOLECULAR BIOLOGY

Course Organiser: Dr T. R. Hesketh (email: t.r.hesketh@bioc.cam.ac.uk)

Course Website: <http://www.bioc.cam.ac.uk/teaching/BMB/>

Note that some lectures begin earlier in Term, and end later in Term, than is usual. This is to allow more time between the end of the course and the examinations. Dr Hesketh will introduce the course as part of the first lecture on F. 5 Oct.

Lectures are given in the *Lecture Theatre of the Sanger Building, Department of Biochemistry, Old Addenbrooke's Site* on M. W. F. at 10

Genes and proteins: macromolecules in action

PROF. C. J. HOWE

Gene Cloning and Manipulation. (Five lectures, 5–15 Oct.)

PROF. DAME JEAN THOMAS

Control of Gene Expression: DNA Structure and DNA-Protein Interactions. (Five lectures, 17–26 Oct.)

PROF. C. W. J. SMITH

Control of Gene Expression: Transcription, RNA Processing and Translation. (Five lectures, 29 Oct.–2 Nov. and 9–12 Nov.)

PROF. SIR TOM BLUNDELL

Protein Structure, Flexibility and Function. (Five lectures, 5–7 Nov. and 14–19 Nov.)

DR F. HOLLFELDER

Enzyme Catalysis and Protein Engineering. (Five lectures, 21–30 Nov.)

Energy transduction, cell signalling and cell proliferation

DR G. C. BROWN

Energy Transduction in Bacteria, Mitochondria and Chloroplasts. (Six lectures, 16–28 Jan.)

Note the early start of this course.

PROF. K. M. BRINDLE

Control of Metabolism. (Six lectures, 30 Jan.–11 Feb.)

DR R. W. FARNDAL

Transmembrane Signalling; Molecules and Mechanisms. (Six lectures, 13–25 Feb.)

DR T. R. HESKETH

Control of Eukaryotic Cell Growth. (Four lectures, 27 Feb.–5 Mar.)

DR T. R. HESKETH

Oncogenes, Tumour Suppressor Genes, and Cancer (Four lectures, 7–14 Mar.)

Biochemistry of microorganisms

DR M. WELCH AND PROF. G. P. C. SALMOND

Bacterial Chemotaxis, Signalling, and Secretion Systems. (Five lectures, 23 Apr.–2 May)

Note the early start of this course.

DR D. M. CARRINGTON

Molecular Biology of Protozoa. (Four lectures, beginning 5–12 May)

Practical work. Practicals are given at the *Hopkins Building, Department of Biochemistry, Downing Site* four hours from 11 a.m. on M. Tu. W. Th. or F. Students should register for all biological practical courses on W. 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site*.

CELL AND DEVELOPMENTAL BIOLOGY

Course Organiser: Dr C. O'Kane (email: c.okane@gen.cam.ac.uk)

Course Website: www.bio.cam.ac.uk/teaching/cdb/index.html

All lectures take place in the *Biffen Lecture Theatre, Department of Genetics*, on Th. S. Tu. 10, unless otherwise stated

DR T. KRUDE AND PROF. S. P. JACKSON

Molecular Biology of the Cell Nucleus. (Nine lectures, 4–23 Oct.)

DR D. SUMMERS AND DR P. OLIVER

Genetic Systems of Prokaryotes. (Six lectures, 25 Oct.–6 Nov.)

DR D. MACDONALD

Molecular Genetics of Yeast Cells. (Four lectures, 8–15 Nov.)

DR C. O'KANE

Genomics and genome evolution. (Five lectures, 17–27 Nov.)

PROF. J. C. GRAY

Organelle Biogenesis. (Six lectures, 15–26 Jan.)

DR M. SEGAL

Cytoskeleton. (Four lectures, 29 Jan.–5 Feb.)

DR P. DUPREE

Membrane Traffic. (Four lectures, 7–14 Feb.)

DR H. SKAER AND DR K. JOHNSTONE

Intercellular Communication. (Four lectures, 16–23 Feb.)

DR J. HASALOTT

Development I. (Six lectures, 26 Feb.–8 Mar.)

DR H. SKAER

Development II. (Two lectures, 11–13 Mar.)

Note the early start of this course

DR H. SKAER

Development II (continued) (Two lectures 22–24 Apr.)

PROF. J. SMITH

Development III. (Four lectures, 26 Apr.–3 May)

DR C. ALONSO

Development IV. (Four lectures, 6–13 May)

Note the early start of this course

Practical work will take place in the *Department of Zoology*. Students are expected to do up to four hours practical work per week between 11 a.m. and 5 p.m. on Tuesdays or Fridays. Practical classes start at several different times to allow students to attend lectures in other subjects. Students should register for all biological practical courses on W. 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site*.

NATURAL SCIENCES TRIPOS, PART 1B (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

CHEMISTRY A

Course 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 *Wolfson Lecture Theatre, Department of Chemistry, Lensfield Road*, on Tu. Th. S. 12 unless indicated

DR S. C. ALTHORPE AND DR P. D. WOTHERS
 Introduction to Quantum Mechanics. (Twelve lectures)
 DR P. D. WOTHERS
 Molecular Spectroscopy (Six lectures)
 DR D. J. WALES
 Symmetry and Bonding. (Six lectures)

DR D. J. WALES
 Symmetry and Bonding. (Six lectures, continued)
 DR J. H. KEELER
 Molecular Energy Levels and Thermodynamics. (Fourteen lectures)
 PROF. S. R. ELLIOTT AND PROF. R. M. LAMBERT
 Electronic Structure and Properties of Solids. (Four lectures)

PROF. S. R. ELLIOTT AND PROF. R. M. LAMBERT
 Electronic Structure and Properties of Solids. (Eleven lectures, continued)

Practical Chemistry. Michaelmas and Lent Terms M. Tu. W. Th. F. 1345–1700. Students must register in the *Department of Chemistry, Lensfield Road*, between 0900 and 1300 or 1400 and 1600 on Tu. 2 Oct., when they will be assigned attendance in the afternoon of a particular day of the week for Chemistry A. All students must attend an introductory talk concerning the Chemistry A practical course on W. 3 Oct. at 1045 in the *Bristol-Myers Squibb Lecture Theatre*.

CHEMISTRY B

Course 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 *Wolfson Lecture Theatre, Department of Chemistry, Lensfield Road*, on Tu. Th. S. 9 unless indicated

DR M. D. SMITH AND PROF. S. BALASUBRAMANIAN
 Key Organic Reactions. (Twelve lectures)
 DR N. BAMPOS
 Structure Determination. (Six lectures)
 DR S. R. BOSS
 Coordination Chemistry. (Six lectures)

DR S. R. BOSS
 Coordination Chemistry. (Two lectures, continued)
 DR P. D. BARKER
 Organometallic Chemistry. (Six lectures)
 DR A. E. H. WHEATLEY
 Electron Deficient Compounds. (Six lectures)
 DR J. M. GOODMAN AND DR P. D. WOTHERS
 Shape and Organic Reactivity. (Ten lectures)

DR F. J. LEEPER AND PROF. C. ABELL
 Introduction to Chemical Biology. (Eleven lectures)

Practical Chemistry. Michaelmas and Lent Terms M. Tu. W. Th. F. 1345–1800 Students must register in the *Department of Chemistry, Lensfield Road* between 0900 and 1300 or 1400 and 1600 on Tu. 2 Oct., when they will be assigned attendance in the afternoon of a particular day of the week for Chemistry B. All students must attend an introductory talk concerning the Chemistry B practical course on W. 3 Oct. at 1000 in the *Bristol-Myers Squibb Lecture Theatre*.

ECOLOGY

Course Organiser: Prof. T. H. Clutton-Brock (email: t.h.clutton-brock@zoo.cam.ac.uk or Rachel Aucott, email: ra338@cam.ac.uk)
 Course Website: www.zoo.cam.ac.uk/degree/1becology/index.htm

All lectures take place in the *Elementary Lecture Theatre, Department of Zoology* at M. W. F. 9

DR D. K. A. BARNES
 The Global Marine Ecosystem. (Six lectures, 5–17 Oct.)
 PROF. H. GRIFFITHS AND DR D. A. COOMES
 The Ecology of Change. (Eighteen lectures, 19 Oct.–28 Nov.)

PROF. N. B. DAVIES
 Predators and Prey. (Six lectures, 18 Jan.–30 Jan.)
 PROF. T. H. CLUTTON-BROCK
 Breeding Systems. (Six lectures, 1–13 Feb.)
 PROF. W. SUTHERLAND
 Ecological Dynamics. (Six lectures, 15 Feb.–27 Feb.)
 DR F. BALLOUX
 Ecological Genetics. (Six lectures, 29 Feb.–10 Mar.)

DR E. V. J. TANNER
 Biodiversity. (Six lectures, 23 Apr.*–5 May)
 *Note the early start of this course
 PROF. A. BALMFORD
 Humans and Ecology. (Six lectures, 7–19 May)

Students should register for all practical courses on W. 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site*.

NATURAL SCIENCES TRIPOS, PART IB (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

EXPERIMENTAL PSYCHOLOGY

Course Organiser: Dr M. Miozzo (email: mm584@cam.ac.uk)

Course website: <http://teaching.psychol.cam.ac.uk/>Lectures will be held in *Lecture Theatre 3, Department of Physiology*, on Tu. Th. S. 11Practical work in the *Psychological Laboratory* unless otherwise stated

PROF. T. W. ROBBINS

Introduction to the study of Experimental Psychology.
(One lecture, 4 Oct.)

DR G. J. DAVIS

Sensation and Psychophysics. (One lecture, 6 Oct.)

DR G. J. DAVIS

Visual Perception. (Four lectures, 9, 11, 13, 16 Oct.)

PROF. B. C. J. MOORE

Auditory Perception. (Five lectures, 18, 20, 23, 25, 27 Oct.)

DR G. J. DAVIS

Attention. (Two lectures, 30 Oct., 1 Nov.)

PROF. A. DICKINSON

Psychobiology of Learning, Memory and Motivation.
(Six lectures, 3, 6, 8, 10, 13, 15 Nov.)

DR J. SIMONS

Higher Cognition. (Five lectures, 17, 20, 22, 24, 27 Nov.)

DR J. RUSSELL

Developmental Psychology. (Six lectures, 17,
19, 22, 24, 26, 29 Jan.)

DR M. MIOZZO

Language and the Brain. (Six lectures, 31 Jan.,
2, 5, 7, 9, 12 Feb.)

DR L. CLARK

Reasoning and Decision Making. (Four
lectures, 14, 16, 19, 21 Feb.)

PROF. S. BARON-COHEN

Atypical Psychology. (Eight lectures, 23, 26, 28
Feb., 1, 4, 6, 8, 11 Mar.)

DR K. C. PLAISTED

Intelligence and IQ. (Three lectures, 24, 26, 29
Apr.)

DR K. C. PLAISTED

Social Psychology. (Five lectures, 1, 3, 6, 8, 10
May)

Practical Work. Tu. 9–11 or W. 10–12 or 2–4 and Th. 2–4 or F. 10–12 or 2–4. Two 2-hour sessions per week, one chosen from Tu. 9–11 or W. 10–12 or 2–4, and the other from Th. 2–4 or F. 10–12 or 2–4. The computing facilities used for the practical work will be available for informal use throughout the year. Students should register for all biological practical courses on Wednesday, 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site*.

GEOLOGICAL SCIENCES A

Course Organiser: Dr N. H. Woodcock (email: nhw1@esc.cam.ac.uk)

<http://www.esc.cam.ac.uk/new/v10/teaching/geology/ib-a/courses.html>All lectures are in the *Tilley Lecture Room, Department of Earth Sciences* on M. W. F. 10

DR N. H. WOODCOCK

Maps and Structures. (Eight lectures)

PROF. R. S. WHITE

Earth Systems. (Eight lectures)

A. N. OTHER

Evolution of the Hydrosphere. (Eight lectures)

DR K. MCNAMARA

Biogenic and Chemical Sediments. ((Eight
lectures)

PROF. I. N. MCCAVE

Clastic Sedimentology. (Eight lectures)

DR N. J. BUTTERFIELD

Evolutionary Palaeobiology and
Micropalaeontology. (Eight lectures)

Introduction to Southwest England field trip. Th.

10 (13 Mar.)

Geological Sciences Field Class. (9–19 Apr.)

DR D. B. NORMAN

Vertebrate Palaeontology. (Five lectures)

DR N. J. WHITE

Sedimentary Basins Reviewed. (Five lectures)

DR N. HOVIUS

GIS for geological mapping (Two lectures)
(at end of term after exams)

Practical Work. There are three practicals per week of about 1½ hours: students choose one from each set (Set 1: F. 11–1, F. 2–4; Set 2: M. 11–1, M. 2–4, Tu. 10–1; Set 3: W. 11–1, W. 2–4, Th. 10–1). Students should go to the *Department of Earth Sciences* on Wednesday, 3 Oct., between 9.30 and 12.30, or 2.30 and 4.30, to register their choice of times from those available.

GEOLOGICAL SCIENCES B

Course Organiser: Dr S. A. Gibson E-mail: sally@esc.cam.ac.uk<http://www.esc.cam.ac.uk/new/v10/teaching/geology/ib-b/courses.html>All lectures are held in the *Tilley Lecture Room, Department of Earth Sciences*, on M. W. F. 9

DR A. GALY

In the Beginning. (Four lectures)

DR R. J. HARRISON

Crystallography and Optical Petrography. (Five lectures)

PROF. M. A. CARPENTER

Principles of Mineral Behaviour. (Eight lectures)

DR J. M. BUNBURY

Introductory Igneous Petrology. (Four lectures)

DR M. EDMONDS

Chemical Differentiation of the Earth. (Three lectures)

DR J. MACLENNAN

Magmatic Settings. (Five lectures)

DR M. EDMONDS

Volcanic Eruptions (One lecture)

DR J. M. BUNBURY

Metamorphic Mineralogy. (Five lectures)

DR T. J. B. HOLLAND

Introduction to Metamorphism. (Eight
lectures)

PROF. M. J. BICKLE

Metabasites (Five lectures)

Introduction to South West England field trip.

Th. 10 (13 Mar.)

Geological Sciences Field Class (9–19 Apr.)

DR M. CADDICK

Evolution of the Himalayas. (Five lectures)

DR S. GIBSON

Igneous Case Studies. (Four lectures)

Practical Work. There are three practicals per week of about 1½ hours, to be taken between successive lectures. Students should go to the *Department of Earth Sciences* on Wednesday, 3 Oct., between 9.30 and 12.30, or 2.30 and 4.30, to register their choices of times from those available, which are M. W. F. 11–1, Tu. Th. S. 9–12.

NATURAL SCIENCES TRIPOS, PART IB (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

HISTORY AND PHILOSOPHY OF SCIENCE

Course Organisers: Prof. S. Schaffer (email: sjs16@cam.ac.uk) and Mr S. John (e-mail: sdj22@cam.ac.uk)
 Course Website: www.hps.cam.ac.uk/students

All lectures will be delivered in *Mill Lane Lecture Room 1*

PROF. S. SCHAFFER

History of Natural Philosophy. M. 5 (weeks 1–8); F. 5 (weeks 1–4)

PROF. M. KUSCH

Epistemology: Scepticism and Testimony. W. 5 (weeks 1–4)

PROF. M. KUSCH

Sociology of Scientific Knowledge. W. 5 (weeks 5–8)

PROF. P. LIPTON

Induction and Causation. F. 5 (weeks 5–8)

PROF. J. SECORD AND DR V. HEGGIE

History of Science, Technology and Medicine. M. 5 (weeks 1–8); W. 5 (weeks 5–8)

PROF. P. LIPTON

Philosophy of Science. W. 5 (weeks 1–4); F. 5 (weeks 1–8)

PROF. J. FORRESTER AND DR V. HEGGIE

History of Science, Technology and Medicine. F. 5 (weeks 1–4)

DR K. BROSANAN

Philosophy of Biology. W. 5 (weeks 1–4)

DR R. JENNINGS

Ethics in Science. M. 5 (weeks 1–4)

MATERIALS SCIENCE AND METALLURGY

Course Organiser: Dr N. A. Rutter (email: PartIB@msm.cam.ac.uk)
 Course Website: www.msm.cam.ac.uk/teaching/mat1b/

All lectures will be delivered in the *Babbage Lecture Theatre* on Tu. Th. S. 10

DR N. A. RUTTER

Phase Transformations. (Twelve lectures)

PROF. G. T. BURSTEIN

Materials and the Environment. (Twelve lectures)

Industrial Visits

Details to be announced.

DR W. J. CLEGG

Biomechanics. (Twelve lectures)

DR Z. H. BARBER

Soft Materials. (Twelve lectures)

The same continued.

DR K. M. KNOWLES

Electronic Properties of Materials. (Ten lectures)

Practical Work. Either Th. 2–4:30 or F. 9–11:30 or Tu. 2–4:30 and up to two further hours each week between 9–5 on any weekday. Students should register for practical classes in the *Department of Materials Science and Metallurgy* between 9.30 a.m. and 12.30 p.m. or 2.30 p.m. and 4.30 p.m. on Tu. 2 Oct.

MATHEMATICS

Course Organiser: (email: nst@maths.cam.ac.uk)
 Course Website: www.maths.cam.ac.uk/undergrad/NST/sched/

Students taking this course must also register electronically for the assessed **Computer Practical Course** before 2 Nov. 2007. Details are given in the course booklet distributed at the first lecture of *Mathematical Methods I* in Oct. 2007.

All lectures will be delivered in the *Arts School, Room A, Bene't Street*, on M. W. F. 11 unless otherwise stated

DR G. I. OGLIVIE

Mathematical Methods I.

Examples Class W. 2.15–4.15 (Two classes, 7, 21 Nov.)

DR J. GUTOWSKI

Mathematical Methods II.

Examples Class W. 2.15–4.15 (Two classes, 13 Feb., 5 Mar.)

PROF. M. E. MCINTYRE

Mathematical Methods III. (Ten lectures)

Examples Class W. 2.15–4.15 (Two classes, 7 May, 21 May)

NATURAL SCIENCES TRIPOS, PART 1B (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

MINERAL SCIENCES

Course Organiser: Dr I. Farnan (email: i.farnan@esc.cam.ac.uk)
<http://www.esc.cam.ac.uk/ibminsci/IB%20Min%20Sci.html>

All lectures are in the *Harker 2 Room, Department of Earth Sciences*, on Tu. Th. S. 11

PROF. S. A. T. REDFERN

Natural materials of comets, meteorites, moons and planets. (Six lectures)

DR A. GOODWIN

Determining the atomic structure of materials. (Nine lectures)

PROF. E. ARTACHO

Phase Transitions. (Eight lectures)

DR R. J. HARRISON

Magnetism of Earth and planetary materials. (Eight lectures)

DR I. FARNAN

Fluids, melts and glasses (Eight lectures)

PROF. M. A. CARPENTER

Microstructure, properties and behaviour of silicates and oxides. (Eight lectures)

Practical Work. M. TH 10–2 or 2–4. Students should register for practical work in the *Department of Earth Sciences (South Entrance)* between 9.30 a.m. and 1 p.m. or between 2.30 and 5 p.m. on Wednesday, 3 Oct.

NEUROBIOLOGY

Course Organiser: Dr L. Saksida (email: lms42@cam.ac.uk)
 Course Website: www.pdn.cam.ac.uk/teaching/

All lectures take place in *Physiology Lecture Theatre 3* on Tu. Th. S. 12

PROF. W. A. HARRIS

Neural Determination (Four lectures, 4, 6, 9, 11 Oct.)

DR H. P. C. ROBINSON

Electrical Properties of Neurons. (Four lectures, 13, 16, 23, 25 Oct.)

DR D. BURDAKOV

Neurotransmission and Neuromodulation. (Four lectures, 18, 20, 27, 30 Oct.)

DR M. EDWARDSON

G-protein Coupled Receptors (One lecture, 1 Nov.)

PROF. S. LAUGHLIN

Vision. (Six lectures, 3, 6, 8, 10, 13, 15 Nov.)

DR I. M. WINTER

Hearing. (Three lectures, 17, 20, 22 Nov.)

DR H. R. MATTHEWS

Olfaction and Taste. (Two lectures, 24, 27 Nov.)

PROF. P. MCNAUGHTON

Somatosensation and Pain. (Four lectures, 15, 17, 19, 22 Jan.)

Note the early start of this course.

DR D. PARKER

Motor System. (Seven lectures, 24, 26, 29, 31 Jan., 2, 5, 7 Feb.)

PROF. D. WOLPERT

Sensorimotor Integration. (Three lectures, 9, 12, 14 Feb.)

DR M. LANDGRAF

Development of Neural Connections. (Four lectures, 16, 19, 21, 26 Feb.)

PROF. B. J. EVERITT

Motivation and Emotion. (Four lectures, 23, 28 Feb., 1, 4 Mar.)

DR B. J. MCCABE

Synaptic Efficacy. (Four lectures, 6, 8, 11, 13 Mar.)

DR MICHELE MIOZZO

Language and the Brain. (Two lectures 22, 24 Apr.)

Note the early start of this course.

DR T. J. BUSSEY

Learning and Memory. (Four lectures, 26, 29 Apr., 1, 3 May)

DR T. J. BUSSEY

Higher Functions of the Nervous System. (Three lectures, 6, 8, 10 May)

Practical Work. 3 hour practical classes Th. 2–5 or Tu. 2–5

Practical Work. Students should register for all biological practical courses on W. 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site.*

NATURAL SCIENCES TRIPOS, PART IB (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

PATHOLOGY

Course Organiser: Dr I. B. Kingston (email: ibk1000@cam.ac.uk)
 Course Website: www.path.cam.ac.uk/ugrad/part1/

All lectures take place in *Chemical Laboratory Lecture Theatre 1* at M. W. F. 12, unless otherwise stated

PROF. A. H. WYLLIE

Cell Injury. (One lecture, 5 Oct.)

DR A. MOFFETT

Innate Immune System; Acute Inflammation: Defence Mechanisms; Healing and Chronic Inflammation. (Three lectures, beginning 8 Oct.)

DR A. KELLY

The Adaptive Immune System; B Cells and Antibodies; The Major Histocompatibility Complex; T Cells. (Four lectures, beginning 15 Oct.)

PROF. J. TROWSDALE

Tolerance; Autoimmunity; Hypersensitivity; Transplantation. (Four lectures, beginning 24 Oct.)

PROF. A. C. MINSON

Viral Multiplication in the Host Cell; Nature of Viruses; Responses to Viral Infection; Acute and Chronic Infection; Epidemiology of Viral Infection; Combating Viral Infection; Prion Diseases. (Seven lectures, beginning 2 Nov.)

DR I. B. KINGSTON

Introduction to Parasitic Diseases; Key Examples of Parasitic Diseases: Malaria; Key Examples of Parasitic Diseases: Schistosomiasis. (Three lectures, beginning 19 Nov.)

DR A. CARMICHAEL

Fungi (Two lectures, beginning 26 Nov.)

DR G. FRASER

Bacterial Disease – Past, Present and Re-emerging; Bacteria: Prokaryotic Pathogens; Bacteria – Host Interaction: Pathogenicity; Host Damage – Toxins, the Host Response; Bacterial Pathogenicity in the Respiratory Tract; Bacterial Pathogenicity in the Gastrointestinal Tract; Combating Bacterial Disease. (Seven lectures, beginning 16 Jan.)

Note the early start of this course.

PROF. A. WYLLIE

Vascular reactions to injury; Atherosclerosis; Ischemia, infarction and their results. (Three lectures, beginning 1 Feb.)

PROF. M. A. STANLEY

The Regulation of Tissue Growth and Organisation; Clinical Pathology of Tumours; Biology of Tumours; Genetic Basis of Neoplasia; Causes of Cancer. (Five lectures, beginning 8 Feb.)

DR P. A. W. EDWARDS

Discovering Genes Mutated in Human Cancer I; Genes Mutated in Human Cancer II. (Two lectures, beginning 20 Feb.)

DR C. CUEVA-MENDEZ

New Therapeutic Targets in Cancer (One lecture, 25 Feb.)

DR C. SMITH

Emerging Virus Infections; Virus Latency and Immune Invasion; HIV. (Three lectures, beginning 27 Feb.)

DR P. DIGARD

Flu Pandemics. (One lecture, 5 Mar.)

DR M. FIELD

Zoonoses – Trypanosomiasis; Zoonoses – Leishmaniasis. (Two lectures, beginning 7 Mar.)

DR J. AJIOKA

Zoonoses – Toxoplasmosis. (One lecture, 12 Mar.)

DR N. BROWN

Emerging bacterial diseases, old and new. (One lecture, beginning 23 Apr.)
Note the early start of this course.

PROF. M. A. STANLEY

Tuberculosis. (One lecture, 25 Apr.)

PROF. D. MASKELL

The evolution of pathogenic bacteria; Bacterial zoonosis. (Two lectures, beginning 28 Apr.)

DR A. THACKRAY

Molecular aspects of prion diseases. (One lecture, 2 May)

Practical Work. *Department of Pathology* Tu. W. Th. F. am and pm. Students should register for all biological practical courses on W. 3 October between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site* and attend an Introduction to Normal Histology for NST students, 4 and 5 Oct.

PHARMACOLOGY

Course Organiser: Dr H. W. van Veen (email: hvw20@cam.ac.uk)
 Course Website: www.phar.cam.ac.uk/teaching/tea_nst1b.html

All lectures take place in the *Lecture Theatre, Department of Pharmacology*, on M. W. F. 11.

PROF. C. W. TAYLOR

Introduction. Structure and Function of Receptors. Diabetes mellitus and obesity. (Nine lectures, 5, 8, 19–31 Oct, 2 Nov.)

PROF. R. F. IRVINE

Intracellular Messengers. (Four lectures, 10–17 Oct.)

DR R. D. MURRELL-LAGNADO

Synaptic Pharmacology. (Four lectures, 5–12 Nov.)

DR A. J. MORTON

Central Nervous System. (Seven lectures, 14–28 Nov.)

DR H. W. VAN VEEN

Antimicrobial and Antiviral Drugs. (Four lectures, 18–25 Jan.)

DR S. B. HLADKY

Pharmacokinetics, Drug Metabolism and General Anaesthetics. (Five lectures, 28 Jan. – 6 Feb.)

DR C. R. HILEY

Cardiovascular and Renal Pharmacology. (Eleven lectures, 8 Feb. – 3 Mar.)

DR Z. SARNYAI

Steroid Receptors and Reproductive Pharmacology. (Four lectures, 5–12 Mar.)

PROF. P. A. MCNAUGHTON

Inflammation and Peripheral Control of Pain. (Seven lectures, 25 Apr. – 9 May)

PROF. D. M. F. COOPER

Cell Growth and Cancer. (Three lectures, 12–16 May)

Practical Work. Tu. 2–5 or W. 2–5. A detailed timetable will be posted in the Department. Students should register for all biological practical courses on W. 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site*.

NATURAL SCIENCES TRIPOS, PART IB (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

PHYSICS A

Departmental Contact: Dr R. Padman (email: IB-physics-A@phy.cam.ac.uk)
 Course Website: www.phy.cam.ac.uk/teaching/

Lectures are given in the *Cockcroft Lecture Theatre, New Museums Site, M. W. F.* at 12

DR N. C. GREENHAM
 Oscillations, Waves and Optics. M. F. 12
 PROF. C. A. HANIFF
 Experimental Methods. W. 12

Laboratory Work

DR R. D. E. SAUNDERS
 Systems and Measurement.

DR H. P. HUGHES
 Quantum Physics. M. W. F. 12

Laboratory Work.
 PROF. C. A. HANIFF AND OTHERS

DR J. ELLIS
 Concepts in Condensed Matter. (First ten lectures) M. W. F. 12

Laboratory Work takes place at the *Cavendish Laboratory (West Cambridge)*. The experimental laboratories are open M. 2–6, Tu. 10–6, Th. 10–6 and F. 2–6. Students will be allocated periods within these times. Students taking both Part IB Physics A and Part IB Physics B should register at 2.00 p.m. on W. 3 Oct. at the *Cavendish Laboratory*. Students taking Part IB Physics A and *not* IB Physics B, must register between 2.00 p.m. and 4.00 p.m. on Tu. 2 Oct., when they will be allocated practical sessions that fit with their other IB subjects. **Laboratory work is continuously assessed.**

PHYSICS B

Departmental Contact: Dr R. Padman (email: IB-physics-B@phy.cam.ac.uk)
 Course Website: www.phy.cam.ac.uk/teaching/

Lectures are given in the *Cockcroft Lecture Theatre, New Museums Site*, unless otherwise stated.

PROF. D. J. C. MACKAY
 Introduction to Computing W. 9. (First three weeks)
 Classes to be confirmed
 PROF. S. WITHINGTON
 Electromagnetism. M. F. 9 (First three weeks), then M. W. F. 9

For those not taking NST Part IB Mathematics:
 DR D. A. GREEN
 Mathematical Methods. M. F. 11 *Room B, Arts School, Bene't Street*

Laboratory Work

DR R. D. E. SAUNDERS AND OTHERS
 Systems and Measurement.

PROF. D. J. C. MACKAY
 The same continued. (First three weeks)
 Classes to be confirmed
 PROF. D. R. WARD
 Thermodynamics M. F. 9 (First three weeks), then M. W. F. 9
 PROF. S. F. GULL
 Classical Dynamics and Fluids. (Last nine lectures, beginning 22 Feb.) M. W. F. 9

Laboratory Work.

PROF. C. A. HANIFF AND OTHERS

PROF. M. A. PARKER AND OTHERS
 Great Experiments. Tu. Th. 9

PROF. S. F. GULL
 The same continued. (First ten lectures) M. W. F. 9

Laboratory Work takes place at the *Cavendish Laboratory (West Cambridge)*. The experimental laboratories are open M. 2–6, Tu. 10–6, Th. 10–6 and F. 2–6. Students will be allocated periods within these times. Students taking both Part IB Physics A and Part IB Physics B should register at 2.00 p.m. on W. 3 Oct. at the *Cavendish Laboratory*.

Students taking Part IB Physics B and *not* IB Physics A, must register between 2.00 p.m. and 4.00 p.m. on Tu. 2 Oct., when they will be allocated practical sessions that fit with their other IB subjects. **Laboratory work is continuously assessed.**

NATURAL SCIENCES TRIPOS, PART 1B (continued)

MICHAELMAS 2007

LENT 2008

EASTER 2008

PHYSIOLOGY

Course Organiser: Dr R. J. Barnes (email: rjb4@cam.ac.uk)
 (In the Lent Term Dr Mike Mason (email: mjm39@cam.ac.uk)
 Course Website: www.physiol.cam.ac.uk/

Lectures are given in the *Physiological Laboratory, Lecture Theatre 1, Tu. Th. S. 9*

DR R. J. BARNES
 Introduction, the Autonomic Nervous System and the Cardiovascular System. (Five lectures, 4–14 Oct.)
 DR MICHAEL J. MASON
 Respiration. (Seven lectures, 16–30 Oct.)
 DR MATTHEW J. MASON
 Endocrinology. (Three lectures, 1–6 Nov.)
 DR S. O. SAGE
 Renal Physiology and Body Fluid Homeostasis. (Nine lectures, 8–27 Nov.)

TO BE ANNOUNCED
 Reproduction. (Six lectures, 17–29 Jan.)
 DR S. K. L. ELLINGTON
 Development. (Two lectures, 31 Jan, 2 Feb.)
 DR D. R. J. BAINBRIDGE AND DR J. GIBSON
 Biology of Pregnancy. (Four lectures, 5–12 Feb.)
 DR D. R. J. BAINBRIDGE
 Birth, Lactation and the Neonate. (Three lectures, 14–19 Feb.)
 DR MATTHEW J. MASON
 Digestion and Absorption. (Seven lectures, 21 Feb. – 6 Mar.)
 T. B. A.
 Weight Regulation and Nutrition. (Two lectures, 8, 11 Mar.)

DR J. JENNER
 Muscle in Exercise. (One lecture, 24 Apr.)
 DR R. J. BARNES
 The Circulation and Exercise (One lecture, 26 Apr.)
 DR D. GORDON
 Training (One lecture, 29 Apr.)
 Exercise in Stressful Environments. (One lecture, 1 May)
 DR R. J. BARNES
 Limits of Performance, oxygen kinetics. (One lecture, 3 May)
 DR MATTHEW J. MASON
 Man in the Arctic. (One lecture, 6 May)
Optional for Medics.
 Vertebrates in the Arctic. (One lecture, 8 May)
 Man in the Desert. (One lecture, 10 May)
 Vertebrates in the Desert. (One lecture, 13 May)
Optional for Medics.
 DR MICHAEL J. MASON
 Man in Space. (One lecture, 15 May)

Practical Work Th. 2–4(5) or Tu. 2–4(5)

The same continued.

The same continued.

Practical Work. Students should register for all biological practical courses on W. 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site.*

PLANT AND MICROBIAL SCIENCES

Course Organiser and Departmental Contact: Dr K. Johnstone (email: kj10@cam.ac.uk)
 Course Website: <http://www.plantsci.cam.ac.uk/teaching/ps1b/>

All lectures take place in the *Large Lecture Theatre, Department of Plant Sciences, on T. Th. S. 11*

PROF. J. C. GRAY
 Introduction and Overview. (One lecture, 4 Oct.)
 PROF. J. C. GRAY
 Genetic Manipulation of Plants. (Two lectures, beginning 6 Oct.)
 DR J. M. HIBBERD AND PROF. A. G. SMITH
 Photosynthesis and Management of Reserves. (Eight lectures, beginning 11 Oct.)
 DR J. M. DAVIES, PROF. H. GRIFFITHS AND DR J. M. HIBBERD
 Plants in the Abiotic Environment: Water, Nutrients and Temperature. (Thirteen lectures, beginning 30 Oct.)

DR K. JOHNSTONE
 Environmental Microbiology. (Six lectures, beginning 17 Jan.)
 DR J. P. CARR AND DR D. J. BAILEY
 Plant Pathology. (Nine lectures, beginning 31 Jan.)
 DR K. JOHNSTONE
 Beneficial Plant-Microbe Interactions. (Three lectures, beginning 21 Feb.)
 DR B. J. GLOVER
 Plant Development. (Six lectures, beginning 28 Feb.)

PROF. A. G. SMITH
 Plants and Animals. (Three lectures, beginning 22 Apr.)
Please note the early start of this course.
 DR D. A. COOMES
 Conservation. (Four lectures, beginning 29 Apr.)
 PROF. J. C. GRAY
 Exploitation of Plants. (Three lectures, beginning 8 May)

Practical work. Students will be expected to do four hours practical work between 12 noon and 5 pm on M. or Tu. in four of the eight weeks of the Michaelmas term; four of the eight weeks of Lent Term, and in three weeks of the Easter Term. Other activities which students will also be expected to attend will be scheduled in vacant practical slots. A field course will take place in Portugal in the Easter Vacation 2008; places are limited and are allocated in order of application. Students should register for all biological practical courses on Wednesday, 3 Oct. between 10.00 and 11.15 in the *Small Examinations Hall, Arts School, New Museums Site.*