



Biosciences Applicant Day

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Overview of this presentation



Your
Degree
Programmes

Our
Professional
Training Year
(PTY)

Our
Research

Modular Bioscience Programmes



8 Modules (120 credits) per year

Semester system:

- » **Autumn: October-January**
- » **Spring: February-June**
- » Christmas & Easter breaks
- » January and June exams
- » Compulsory & optional modules
- » Some Programme flexibility



**Let's talk
about your
choice**

BSc (Hons) Biochemistry

The study of fundamental processes of life at the molecular and cellular level:

- » Metabolism in health & disease
- » Endocrinology
- » Pharmacology & Toxicology
- » Neurobiology



MSci (Hons) Biochemistry

- » Taking BSc Biochemistry to a higher level
- » Studies application to real research problems in Biochemistry
- » Four taught modules plus 50% research
- » Undergoing RSB accreditation



BSc (Hons) Biomedical Science



Explore the science that underpins and advances clinical practice and treatment of disease

- » IBMS accredited
- » Clinical focus



BSc (Hons) Microbiology



The study of microscopic life forms



During this programme you will study:

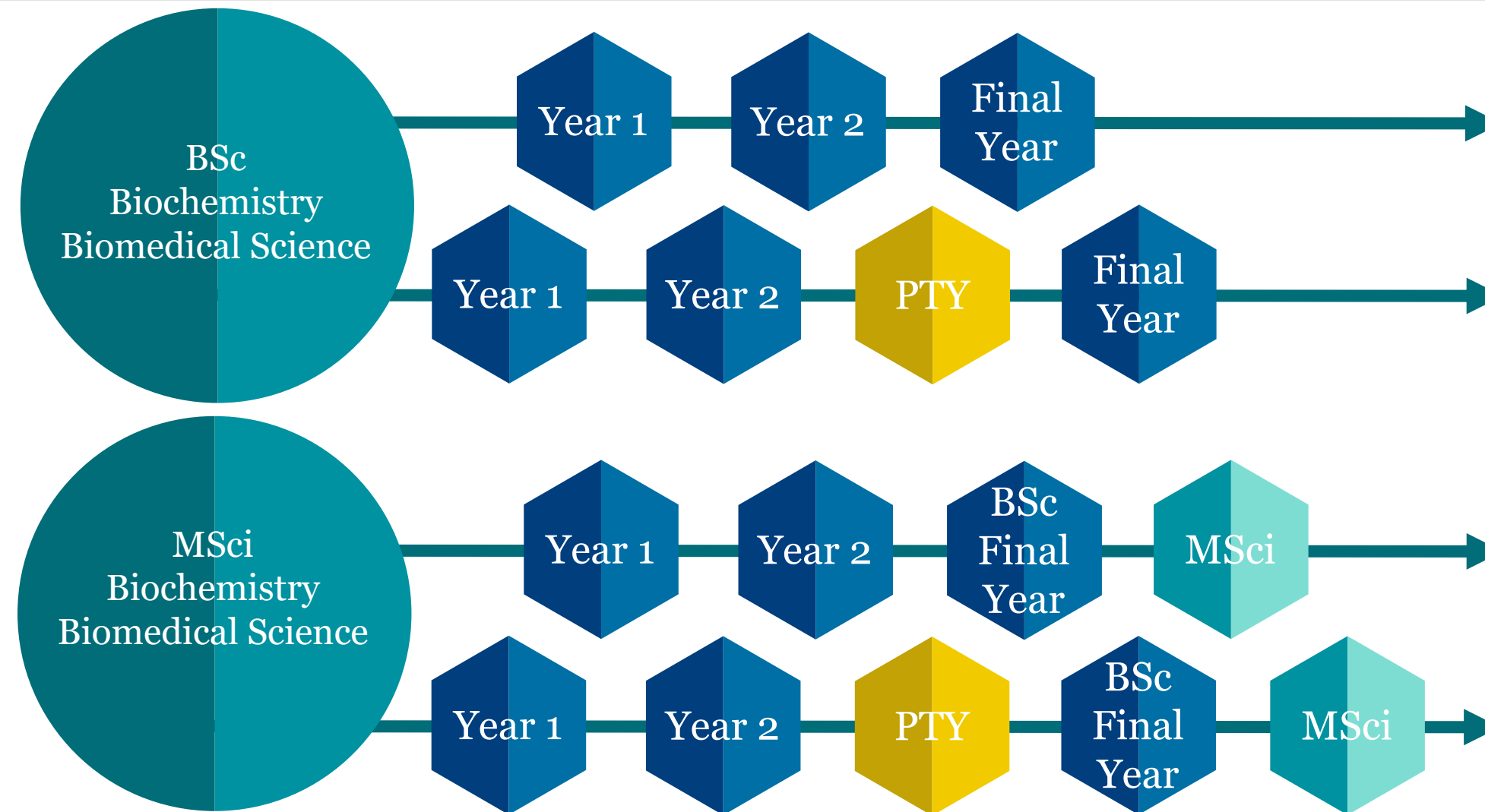
- » The diseases that microbes cause, and how they infect us
- » How the immune system works, and what happens when our defences fail
- » How infections spread, and how we control them
- » The role of the human microbiome
- » Microbes in biotechnology; food, and industrial processes.

MSci (Hons) Biomedical Science



- » To be launched September 2020
- » Advancing the BSc with an additional year
- » Medical research and pathology focus, including skills for professional scientists
- » (120 credits), including four taught modules plus 50% research project
- » Undergoing IBMS accreditation

How the BSc and MSci programmes work



Teaching and Assessment

Contact time

Year 1	20 – 25 hours per week
Year 2	15 – 20 hours per week
Year 3	about 15 hours per week + project

Modes of Delivery

Lectures

Tutorials

Lab-based practicals

Role plays

Small group work

Assessment methods

Examinations

Essays/ written work

MCQs

Presentations

Practical write-ups

Level 4 modules (first year)

Module	Biochemistry	Biomedical Science
BIOCHEMISTRY: UNDERSTANDING THE CHEMISTRY OF LIFE	Compulsory	Compulsory
CELL BIOLOGY	Compulsory	Compulsory
CURRENT TOPICS IN BIOSCIENCES	-	Compulsory
EXPLORING BIOCHEMISTRY	Compulsory	
MICROBIOLOGY: AN INTRODUCTION TO THE MICROBIAL WORLD	Compulsory	Compulsory
BIOCHEMISTRY - A CONCEPTUAL OVERVIEW	Compulsory	Compulsory
EVOLUTIONARY ORIGINS OF BIODIVERSITY	Compulsory	
INTRODUCTION TO PRINCIPLES OF PHYSIOLOGY AND PRACTICAL SKILLS	Compulsory	Compulsory
MOLECULAR BIOLOGY AND GENETICS - GENES AND THEIR FUNCTION	Compulsory	Compulsory
PRACTICAL AND BIOMEDICAL BACTERIOLOGY		Compulsory

Level 5 modules (second year)

Module	Biochemistry	Biomedical Science
BIOCHEMISTRY - ENZYMES AND METABOLISM	Compulsory	Compulsory
CELLULAR MICROBIOLOGY AND VIROLOGY	Optional	Compulsory
INTEGRATION OF PHYSIOLOGICAL SYSTEMS	Compulsory	Compulsory
MOLECULAR BIOLOGY AND GENETICS: FROM GENES TO BIOLOGICAL FUNCTION	Compulsory	Compulsory
NEUROSCIENCE, FROM NEURONES TO BEHAVIOUR	Optional	
ANALYTICAL AND CLINICAL BIOCHEMISTRY	Compulsory	Compulsory
INTRODUCTION TO IMMUNOLOGY	Compulsory	Compulsory
MICROBIAL COMMUNITIES AND INTERACTIONS	-	Optional
PATHOLOGY AND MEDICINE	Compulsory	Compulsory
PHARMACOLOGY: INTRODUCTION TO DRUG ACTION	Compulsory	Optional



**How you will
study -
facilities and
opportunities**

Professional Training Year (PTY)

We find the placements

- » All students can opt for PTY
- » ~60% of students choose PTY
- » Paid & unpaid placements
- » Tuition fee significantly reduced
- » 2-3 tutor visits
- » - does not count towards degree classification



Recent PTY Placements

United Kingdom	
Sanofi	AstraZeneca Environmental
Shepherd Neame	Quotient Bioresearch
Royal Surrey County Hospital	UCL Molecular Biology Laboratory
Medpharm	Whitman labs
LGC Forensics	Thermofisher Scientific
GlaxoSmithKline	The Animal and Plant Health Agency (APHA)
Cardiff Medical School	Pirbright Institute
Plymouth Hospital	Royal Botanic Gardens Kew

International	
Belgium: Leuven	Italy: Milan, Sardinia
Denmark: Lindholm	Spain: Madrid, Barcelona
Finland: Turku, Kuopio, Helsinki	Sweden: Kalmar, Lund
France: Paris, Lyon	Australia: Sydney
Germany: Potsdam, Bonn, Frankfurt	USA: New York, Boston, North Carolina
Holland: Amsterdam, Groningen	China: Shanghai

Undergraduate students contribute to research



Histamine H₃-receptor signaling in cardiac sympathetic nerves: Identification of a novel MAPK-PLA₂-COX-PGE₂-EP₃R pathway

Roberto Levi^{a,*}, Nahid Seyedi^a, Ulrich Schaefer^a, Rima Estephan^a, **Christina J. Mackins**, **Eleanor Tyler**, Randi B. Silver^b

^aDepartment of Pharmacology, Weill Medical College of Cornell University, New York, NY 10021, United States

^bDepartment of Physiology and Biophysics, Weill Medical College of Cornell University, New York, NY 10021, United States

Inter-Individual Differences In Habitual Sleep Timing and Entrained Phase of Endogenous Circadian Rhythms of *BMAL1*, *PER2* and *PER3* mRNA in Human Leukocytes

Simon N. Archer, PhD, Antoine U. Viola, PhD, **Vanessa Kyriakopoulou**, BSc, Malcolm von Schantz, PhD, and Derk-Jan Dijk, PhD



Absence of phosphoglucose isomerase-1 in retinal photoreceptor, pigment epithelium and Muller cells

Simon N. Archer¹, Poonam Ahuja², Romeo Caffé², **Catherine Mikol**¹, Russell G. Foster³, Theo van Veen² and Malcolm von Schantz¹



JOURNAL OF VIROLOGY

Published Twice Monthly by the American Society for Microbiology

The 5' untranslated region of Rhopalosiphum padi virus contains an internal ribosome entry site which functions efficiently in mammalian, plant, and insect translation systems.

Woolaway KE, **Lazaridis K**, Belsham GJ, Carter MJ, Roberts LO.

DRUG METABOLISM & DISPOSITION

Vol. 34, No. 8
9498/3128273
Printed in U.S.A.

INDUCTION OF CYP1A AND CYP2-MEDIATED ARACHIDONIC ACID EPOXYGENATION AND SUPPRESSION OF 20-HYDROXYEICOSATETRAENOIC ACID BY IMIDAZOLE DERIVATIVES INCLUDING THE AROMATASE INHIBITOR VOROZOLE^[S]

Silvia Diani-Moore, **Fotini Papachristou**, Erin Labitzke, and Arleen B. Rifkind

Department of Pharmacology, Weill Medical College of Cornell University, New York, New York

Proceedings of the National Academy of Sciences

Mast cell renin and a local renin–angiotensin system in the airway: Role in bronchoconstriction

Arul Veerappan^{*}, Alicia C. Reid^{*}, Racha Estephan^{*}, Nathan O'Connor^{*}, **Maria Thadani-Mulero**[†], Mariselis Salazar-Rodriguez[†], Roberto Levi[†], and Randi B. Silver^{**‡}

Departments of ^{*}Physiology and Biophysics and [†]Pharmacology, Weill Cornell Medical College, 1300 York Avenue, New York, NY 10065

The ideal Biosciences graduate



Employability 2018/19

8th
in the
Guardian for
Biosciences
2020



Faculty of
Health and
Medical
Sciences:
91%

TEF GOLD

Gold in the
UK's first
teaching
excellence
framework



Graduate:
94%

Examples of graduate destinations

Research (MSc) PhD	Teaching
Academic	Nursing
Pharma/Biotech/CRO	Law
Medicine (Fast Track)	Marketing
Dentistry	Accountancy
NHS Biomedical Scientist	Finance Management
Forensics	Business/Commerce
Scientific Civil Service	Armed Forces Personnel
Scientific publishing	

Graduation

