

Discover Postgrad: Introduction to Master's Study

School of Biological Sciences

Wednesday 17 October 2018

Dr Sarah Herrick

Senior Lecturer and School PGT Director

School of Biological Sciences



The University of Manchester

Discover Postgrad
TAUGHT STUDY AND YOU

Welcome

Felicity Wicks

Discover Postgrad Project Officer

Housekeeping

- Please tick your name off on the sign-in form
- We are not expecting a fire alarm...
- Please put mobile phones on silent
- This session will be available as a podcast afterwards and the slides will be emailed to you
- Please complete the evaluation form on your desk before leaving / having cake!

Welcome

- Introduction to Discover Postgrad
- This session:
 - Reasons for doing a taught master's degree
 - Scientist Training Programme
 - Stepping up to master's level
 - Q&A with current students
 - End 11am (refreshments; informal Q&A)

Reasons for doing a taught master's degree

Dr Sarah Herrick

*Senior Lecturer and School PGT Director
School of Biological Sciences*

What is a master's?

- MSc, MRes....
- One-year course, either taught (like an undergrad degree) or research based (with your own project)
- Can be preparation for PhD research (or to consider whether you want to do a PhD)
- Some are integrated as part of a PhD (1+3)
- Can be training for a specific career, either science or non-science

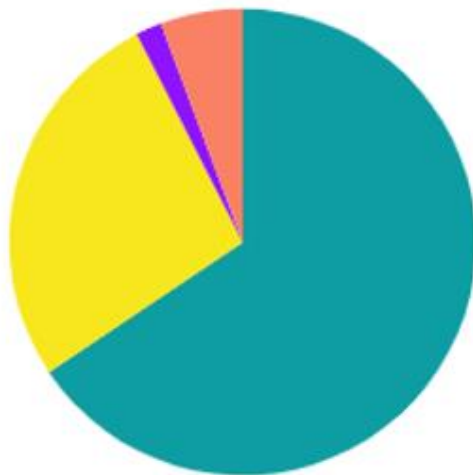
Why do a master's?

- To make a more competitive PhD application
- To compensate for a 2:2 in your undergrad
- To decide whether you want to do a PhD
- To specialise in a particular career
 - science-based e.g. science communication
 - non-science e.g. business, management, marketing
 - other non-science careers that require PG study, but not a full master's e.g. teaching, law conversion

What do master's graduates go on to do?

Destination of Biology master's graduates

2015/16 year of study, activity 6 months after graduating



■ Work (65.60%) ■ Further study (26.90%)
■ Work & further study (1.80%) ■ Unemployed (5.70%)

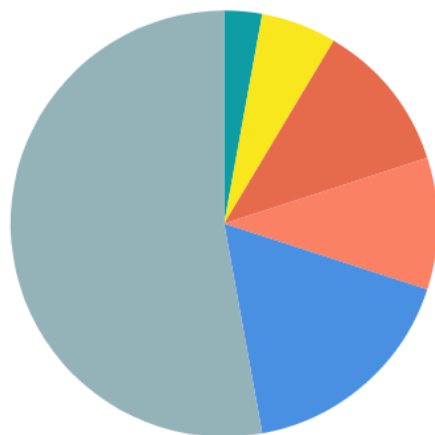
Earnings of Biology master's graduates

2015/6 tax year data
median salary



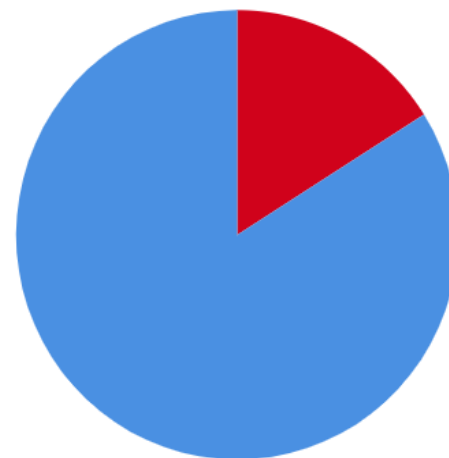
What do master's graduates go on to do?

Employment areas of Biology master's graduates



■ Manufacture of pharmace.. (2.86%)
 ■ Engineering-related (5.71%)
■ Science-related (11.43%)
 ■ Scientific research and.. (10%)
■ Education (17.14%)
 ■ Non-science related (52.86%)

Employment levels of Biology master's graduates



■ Non-professional employment (16%)
■ Professional employment (84%)

How do you fund a master's?

- Unlike PhDs, very little funding available for master's
- However... government-backed master's loans are available. 2019 amounts not yet confirmed, but for 2018 entry, this was a maximum of £10,609.
- There are various other funding sources.
Further information: master's applications and funding information sessions on 5th or 6th November
<https://tinyurl.com/yajhu22b>

Scientist Training Programme

Prof Andy Brass

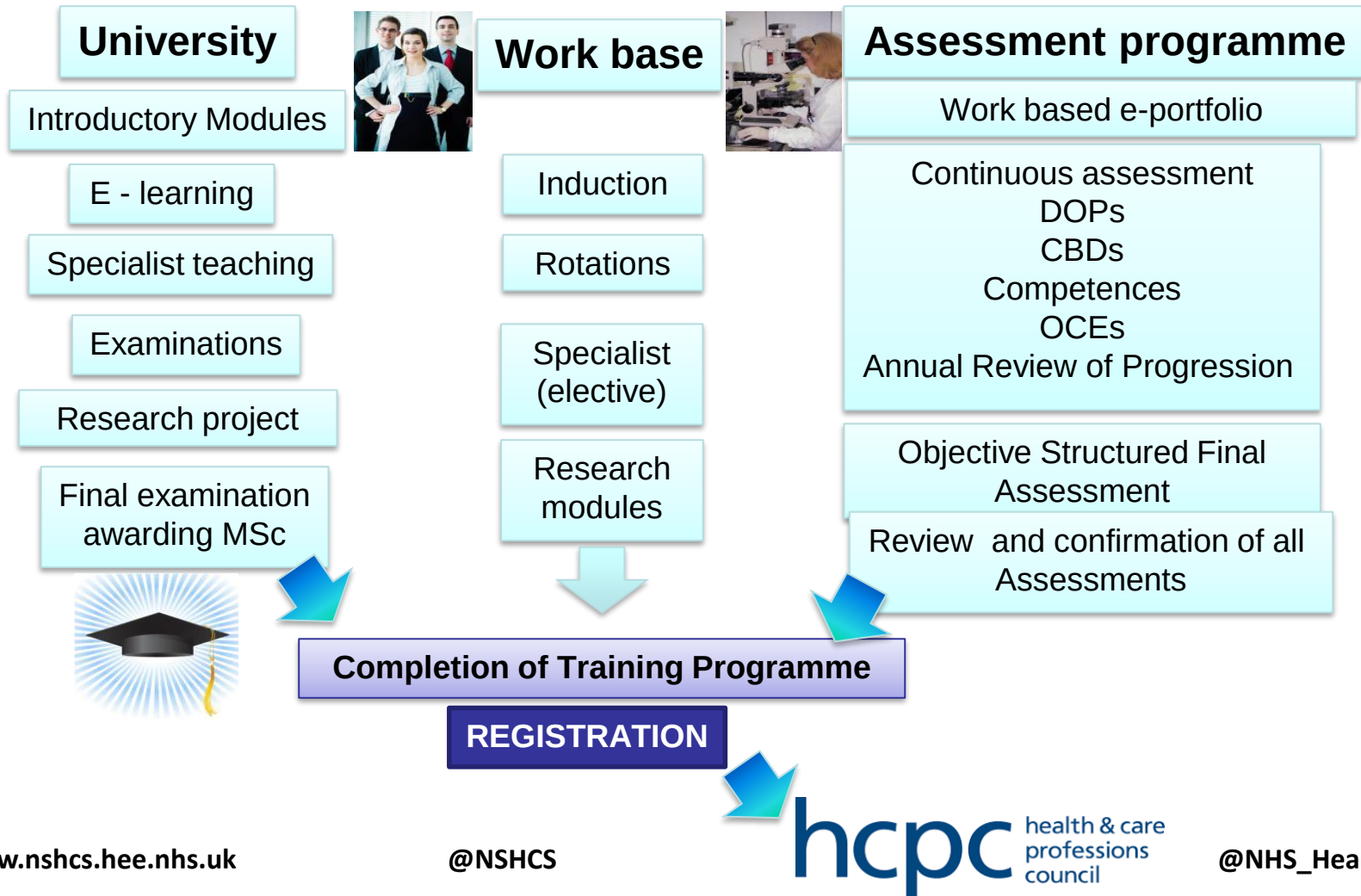
Co-Director, STP Clinical Bioinformatics

Who are Healthcare Scientists?

Healthcare Scientists make a difference to people's lives...
and so can you

- Only make up 5% of NHS workforce but involved in 80% of all clinical decisions
- Eg blood science, audiology, genomic counselling, bionformatics
- Are developing some of the most amazing clinical and technological advancements.

Structure of the STP



The Scientist Training Programme

- Coordinated by the [National School of Healthcare Science](#) in collaboration with employers, academic providers, professional bodies, commissioners and the Academy for Healthcare Science
- Supports nearly 900 STP trainees in over 500 NHS departments across England, Scotland, Wales and Northern Ireland

STP Specialisms

Life Sciences

- Haematology and transfusion science
- Clinical biochemistry
- Genomics
- Genomic counselling
- Reproductive science
- Cytopathology
- Clinical Immunology
- Histocompatibility & immunogenetics
- Histopathology
- Microbiology

Physiological Sciences

- Audiology
- Cardiac science
- Critical care science
- Gastrointestinal physiology
- Neurophysiology
- Ophthalmic and vision science
- Respiratory & sleep sciences
- Urodynamics science
- Vascular science

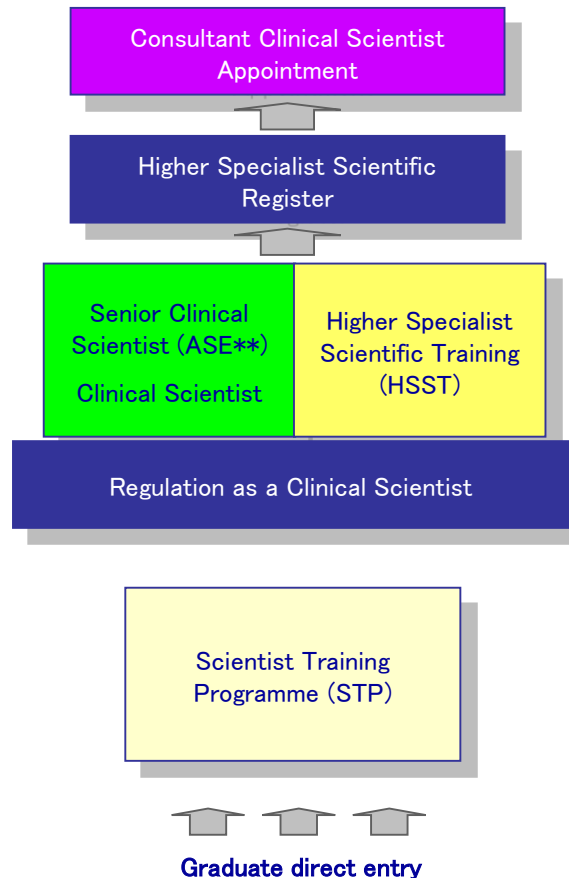
Clinical Bioinformatics

- Clinical Bioinformatics (Genomics)
- Clinical Bioinformatics (Physical Sciences)
- Clinical Bioinformatics (Health Informatics)

Physical Sciences

- Clinical pharmaceutical science
- Imaging (ionising radiation)
- Imaging (non-ionising radiation)
- Clinical measurement and development
- Medical device risk management and governance
- Radiation safety physics
- Radiotherapy physics
- Reconstructive Science
- Rehabilitation engineering

Careers in healthcare science pathway



What is MAHSE?

- Cross-University body
- Encourages innovation and sharing of good practice
- Support and develop PTP/STP/HSST delivered in Manchester
- 8 STP themes being delivered



MAHSE MSc Clinical Science

Physiological Sciences

Neurosensory

- Audiology
- Neurophysiology
- Ophthalmic and Vision Science

CCVRS

- Cardiac Science
- Critical Care
- Vascular Science
- Respiratory and Sleep

Gastrointestinal
Physiology and
Urodynamic Science

Physical Sciences

Medical Physics

- Radiotherapy Physics
- Radiation Safety
- Imaging (non-ionizing)
- Imaging (ionizing)

Clinical Engineering

- Rehabilitation Engineering
- Clinical Measurement and development
- Device Risk Management and governance

Clinical Pharmaceutical
Science

Reconstructive Science

Life Sciences

Cellular Sciences

- Cytopathology
- Histopathology
- Reproductive Science (Andrology)
- Reproductive Science (Embryology)

Blood Sciences

- Clinical Biochemistry
- Clinical Immunology
- Haematology and Transfusion Science
- Histocompatibility and Immunogenetics

Infection Sciences

- Clinical Microbiology

Genomic Sciences

- Cancer Genomics
- Genomics
- Genomic Counselling

Clinical Bioinformatics

Clinical Bioinformatics

- Genomics
- Health informatics
- Physical Sciences

All in Blue offered by MAHSE

How do you become a Clinical Scientist?

- Apply for job in January to start in September
- Online aptitude tests
- Application form on NHS Careers website
 - answer the 4 questions on the form
 - relate your experience to the **patient**
- Application forms assessed – shortlisted
- Interviews in Birmingham during March/April (speed-dating)
- Successful candidates choose preferred location
- [Information about applying to the Scientist Training Programme](#)

What makes a good Clinical Scientist?

- **High achieving** graduates
- People who are **passionate** about science or technology
- People who want to apply their skills and knowledge for the benefit of **patients** and the **public**
- People who seek constant **improvement** and **innovation**
- Many will work directly with patients as well as being involved in innovation, **research** and **development** and **education** and **training**

Resources and tips

- Websites:
 - NHS careers & National School of Healthcare Science (NSHCS)
 - Public Health England / Royal College of Pathologists
 - [STP Perspectives](#)
- Application:
 - Reference the NHS Values & Behaviours (NHS Constitution) & focus on the patient
 - Understand where Clinical Scientists and **the role you're applying for fits** into the healthcare system
 - Speak to people in the field, volunteer, attend lab visits: be **proactive**

Clinical Bioinformatician Role

- [The role of Clinical Bioinformatician](#)
- Genomics specialism
 - Responsible for analysing and interpreting genetic data and advising scientists and clinicians to best inform patient care.
 - Involved in building the necessary IT infrastructure including appropriate servers, databases and pipelines to analyse the data.
 - Leadership role in establishing best-practice for data analysis and interpretation, data storage and governance within their laboratory.
 - Interact with multidisciplinary teams including clinical scientists, clinical geneticists, other specialty clinicians and genetic counsellors, and advise colleagues with respect to interpretation of genetic data that will inform patient care.

What does it take to succeed as a postgraduate?

Prof Judy Williams

*Director, Centre for Academic and Researcher Development
Deputy Associate Dean for Staff Development*

Faculty of Biology, Medicine and Health



What is the difference between Undergraduate and Postgraduate Study?

- Turn to the person next to you
- Identify 3 key differences from your perspective



Higher level of understanding, greater independence and more specialised knowledge than undergraduate study. Graduates with a postgraduate degree are considered more highly qualified as a result.

- Organisation and assessment of your degree could be different
- Less large group teaching and more Self directed study
- Dissertation
- Diversity in classes
- Frequently asked to present and justify your ideas

What can you do now to check if you would like postgraduate study?

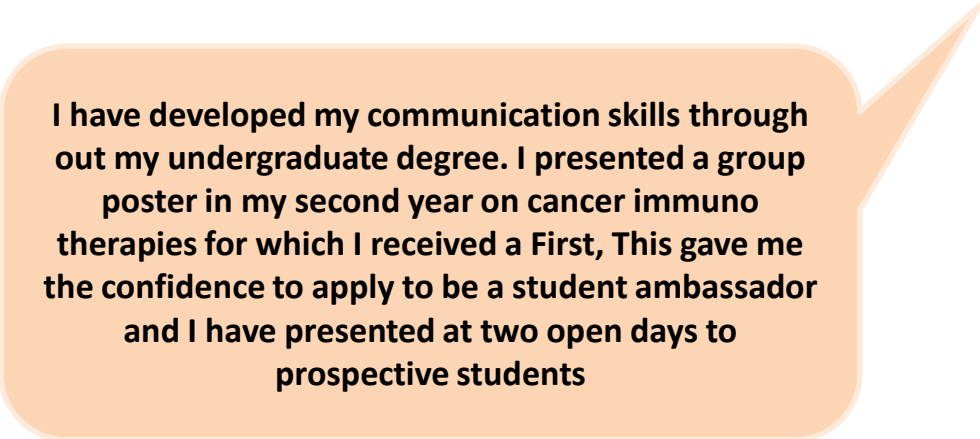
- What are you passionate about?
- From your current degree what really interests you?
- What have you enjoyed most?
- What worries you the most about postgraduate study?

Support for selling your achievements

- Think **CAR**
- **Context**
- **Action**
- **Result**



I have Great communication skills



I have developed my communication skills throughout my undergraduate degree. I presented a group poster in my second year on cancer immunotherapies for which I received a First, This gave me the confidence to apply to be a student ambassador and I have presented at two open days to prospective students

What are the Programme Directors looking for in you?

- Using **CAR** turn to the person next to you and try and describe one key skill
 - Organisation
 - Project planning or research skills
 - Academic writing or publishing
 - Presentation skills

Next Steps



- What do you need to be successful?
- Support
 - Academic Advisor
 - Careers service
 - My Learning Essentials
- Action
 - What are you going to do next?
 - When are you going to do it?

Q&A with current students

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Q&A with current students

- Mohammad Akhtar
 - Rebecca Carroll, MSc Cancer Research & Molecular Biomedicine
-
- Why have you chosen to study a master's?
 - How did you choose your course and university?
 - How are you finding it so far?

Any questions?

- Informal Q&A / networking until 12 noon
- Please complete your evaluation form



Sign up to our other events and mentoring scheme:

www.manchester.ac.uk/discoverpostgrad

- 5th November – **application and funding seminar**
- 13th November – **alumni Q&A panel session**
- **Mentoring scheme** - ongoing