BSc (Honours) Biomedical Sciences 2017

2 + 1 Programme with Newcastle University UK
Entry September 2017
Thank you for considering Newcastle University Medicine Malaysia (NUMed Malaysia) as you contemplate your options for your future education.

Newcastle University is a top-20 UK university with a global reputation for academic excellence. The university itself began as a medical school in the UK in 1834, and we have been education students from Malaysia for over 40 years. We established NUMed Malaysia as a full-owned international branch campus in 2009, and have already produced over 100 graduates. Since then, Malaysian and international students have had the opportunity to study for the BSc (Honours) Biomedical Sciences degree at a significantly reduced cost compared with the same programme at our UK campus.

The 2 + 1 BSc (Honours) Biomedical Sciences programme (N/720/6/0035) is a three year degree with the first two years being studied at NUMed Malaysia and the third and final year at Newcastle University, UK. Successful completion of the entire programme will lead to the award of a Bachelor of Science (Honours) degree from Newcastle University, UK. By choosing to study this 2 + 1 programme at both NUMed Malaysia and Newcastle University, UK you will have the benefit of being taught at a highly successful, internationally recognized, British University in Malaysia for the first two years of the programme. Further to this you will have the benefit of being taught at a designated centre of excellence for biomedical research by internationally recognised research staff in the final year of your studies at Newcastle University, UK.

Delivery of the Newcastle BSc (Honours) Biomedical Sciences programme in Malaysia has been approved by the Malaysian Qualifications Agency (N/720/6/0035), and Newcastle University Medicine Malaysia (DULN005(J)) is registered as a Private Institute of Higher Learning by the Ministry of Higher Education Malaysia.

We invite you to study with us and I hope that this brochure provides you with all the information you need to make your choice. I look forward to having the opportunity of welcoming you to NUMed Malaysia.

Professor Roger Barton
Provost and Chief Executive Officer

Newcastle has become one of only 14 universities in the world to achieve five plus QS Stars from QS Quacquarelli Symonds, the first international assessment of its kind.

The Stars system rates universities against a number of performance indicators as set against pre-established international standards.

- Teaching
- Student Employability
- Research
- Internationalisation
- Facilities
- Innovation
- Inclusiveness
- Life Sciences and Medicine

The QS Stars system is operated by the QS Intelligence Unit, the independent compiler of the QS World University Rankings® since 2004. The system evaluates universities across a wide range of important performance indicators as set against pre-established international standards. By covering a broader range of criteria than any world ranking exercise, QS Stars™ shines a light on both the excellence and the diversity of the rated institution.

Find out more:
QS Quacquarelli Symonds Stars system.
QS Stars: new university rating.
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## A Degree in Biomedical Sciences. What next?
Undergraduate Biomedical Sciences

Studying BSc (Honours) Biomedical Sciences at NUMed Malaysia and Newcastle UK

New discoveries in the biomedical sciences provide us with the prospect of finding new ways to prevent and treat the wide range of diseases that affect humankind. The BSc (Hons) Biomedical Sciences (BMS) 2 + 1 programme offered by NUMed Malaysia and Newcastle University, UK covers the diverse range of subjects relating to medicine and include the study of key areas such as biochemistry, genetics, physiology, microbiology, immunology, and pharmacology, and thus provides a multidisciplinary approach to understanding the functioning of the human body in health and disease.

The BSc (Hons) Biomedical Sciences (BMS) degree programme offered at NUMed Malaysia is split into two parts: Part I - Two academic years, which mirrors the programme offered in the UK, delivered at the brand new custom built 5.5-hectare NUMed Malaysia campus in Iskandar Puteri, Johor, and Part II - One academic year at the Newcastle UK campus with research-led teaching and an intensive research project in one of the highly regarded research institutes in Newcastle University Medical School. The course you will study is equivalent to the one delivered at our Medical School in the UK, and following successful completion of the programme you will be awarded the degree BSc (Hons) Biomedical Sciences by Newcastle University, UK.

Newcastle University and Biomedical Sciences

Newcastle University UK is a modern university with a rich tradition of scholarship, a proud record of service and a truly global alumni network. The reputation and popularity of the University is backed up by the high-quality teaching and learning experience and the research opportunities available to students. Newcastle is a Russell Group University that consistently ranks in the top 20 in the UK for research power and student experience, and is the first UK University to establish a fully owned international branch campus for medicine and the biomedical sciences in Malaysia.

While NUMed Malaysia was only established in 2009, the history and heritage of the University in the UK dates back to 1834, when a School of Medicine and Surgery was first established in the city of Newcastle upon Tyne. Newcastle University Medical School is a world leading collaboration of research scientists, medical doctors and teaching professionals who have enjoyed a reputation for innovation and excellence for both our research and teaching and our BSc (Hons) Biomedical Sciences is consistently one of the most highly regarded courses in the UK. Biomedical Sciences at Newcastle University UK has scored 93-100% overall student satisfaction since 2011 in the National Student Survey and the University is a National Centre of Excellence in biomedical research.
Being away from my home-country is a challenging, yet exciting thing to do. This means that I must be able to adapt to the different environment and culture. I am glad that I chose NUMed as a place to do my tertiary education where all the facilities and services provided are excellent!

Although I'll be studying here in Malaysia for the first two years before transferring to the UK, the modules taught here are exactly the same as the UK campus. Trust me, you'll love the course even more as you are doing the practicals in the laboratory just like I do!

The laboratory includes all the equipment needed to develop the necessary skills prepare myself for the most exciting part of the course, which is to do a piece of an original research project in a top-rated research laboratory in the Faculty of Medical Sciences in the UK campus during my final year.

"
Application for entry in September 2017 is now open

NUMed Malaysia has only one intake per year, in September. If you already meet the entry requirements outlined below, or are forecast to meet the requirements by mid-August 2017, then you should apply now using the following procedure:

1. You must apply directly to NUMed Malaysia, and not through the UCAS system. Applicants should download and complete the Application Form from the NUMed Malaysia website http://www.newcastle.edu.my.
2. You should return your fully completed Application Form, together with the documents listed below, by email to admissions@newcastle.edu.my.
   - Transcripts/certificates showing your previous academic awards/examination results.
   - Your current academic transcripts or forecast results in your pre-university examination. These must be certified by your school or college.
   - A copy of your identity card or passport.
3. Once we have received your application, an acknowledgement email will be sent to you from the NUMed Malaysia Admissions team.
4. Your application will be considered by our Admissions team and you will then be notified whether you have been offered a place on the BSc (Honours) Biomedical Sciences programme.

Malaysian applicants: While there is no formal closing date for the receipt of applications, you are encouraged to apply early as places on the programme are offered throughout the year and a limited number of places are available.

International applicants: The closing date for receipt of international application is 15th July 2017. This is to permit enough time for us to assist you to obtain your student visa.

The date of registration for enrolment in 2017 is Monday 25th September 2017.

Fees

The overall tuition costs of obtaining the Newcastle University BSc (Honours) in Biomedical Sciences on the joint 2 + 1 programme with NUMed Malaysia and Newcastle University, UK is significantly less than the cost of studying for the same degree for three years in the UK.

A single inclusive fee is charged to cover the costs of tuition, library, laboratory, placements, examination, administration fees, and all other academic-related charges for each of the three years of the programme. The fees also include a core textbook.

<table>
<thead>
<tr>
<th></th>
<th>FEES 2017-2018</th>
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<tbody>
<tr>
<td>Malaysian Students</td>
<td>RM40,240 per annum, for each of the three years of the programme (both NUMed Malaysia and Newcastle UK)</td>
</tr>
<tr>
<td>International Students</td>
<td>RM44,100 per annum, for each of the three years of the programme (both NUMed Malaysia and Newcastle UK)</td>
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You should note that the fees do not include the cost of your living accommodation in either Malaysia or the UK. There is a range of accommodation in Malaysia at varying prices for you to choose from either at the adjacent Student Village in EduCity, the NUMed managed accommodation Horizon Residence or elsewhere. Newcastle University, UK has a wide range of accommodation options to suit a range of budgets and a choice of locations with the majority of University accommodation being within 10 minutes’ walk from the campus and city centre. See ‘Student Life at NUMed Malaysia’ and ‘Student life at Newcastle University, UK’ later in the brochure.

Financial Assistance

External Sponsorship

Please visit our website at http://www.newcastle.edu.my for information on sponsoring bodies which may consider supporting your studies.

Malaysian Students

International Students

FEES 2017-2018

RM40,240 per annum, for each of the three years of the programme (both NUMed Malaysia and Newcastle UK)

RM44,100 per annum, for each of the three years of the programme (both NUMed Malaysia and Newcastle UK)
The Vice Chancellor’s NUMed Merit Awards
Each year progression awards are given to those of our students who have achieved academic distinction in their previous year of study. Each award is for one year and is equivalent in value to 10% of the annual fee.

Entry Requirements
To enter NUMed Malaysia, students must satisfy the academic, English language proficiency and age requirements of the University set out below.

Students who have completed SPM, O-Level, or equivalent programmes must first complete a recognised pre-university qualification as a basic requirement for entry to an undergraduate degree at NUMed Malaysia. You may wish to consider A-Levels, International Baccalaureate or Foundation Certificate in Biological and Biomedical Sciences (http://www.ncl.ac.uk/numed/study/undergraduate/foundation/index).

Selection will be based on a combination of:
- Your pre-university examination results (or forecast results)
- Proficiency in English

Pre-University Examinations and Grades
We recognise that students will apply with a range of qualifications. While we consider each applicant on an individual basis taking into account the information you provide in your application, including your past academic performance and potential, you need to demonstrate a high level of academic achievement and excellent results in your pre-university examinations.
You should note that whatever pre-university qualifications you offer, they should include the science subjects Biology and Chemistry at a level equivalent to A Levels, International Baccalaureate Diploma or STPM, and Mathematics at O-Level or SPM if not offered at a higher level.

The examination grade requirements given in the table below are indicative only:

<table>
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<tr>
<th>EXAMINATIONS</th>
<th>REQUIREMENTS/GRADERS</th>
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<tbody>
<tr>
<td>A-Levels</td>
<td>Normally 12 points at A2 level (A=5; B=4; C=3; D=2; E=1)</td>
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<tr>
<td></td>
<td>Normally we take the three highest ‘A’ level grades offered, however further further</td>
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<td></td>
<td>consideration may be given to additional academic achievement. We do not accept General</td>
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<td></td>
<td>Studies or Critical Thinking as A2 level qualifications.</td>
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<tr>
<td>Malaysian Matriculation</td>
<td>3.5 or better, including the required science subjects of Biology and Chemistry.</td>
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<tr>
<td>(MATRICS)</td>
<td></td>
</tr>
<tr>
<td>Australian Year 12 (ATAR)</td>
<td>Based on an ATAR score of 90 as reflected in the transcript.</td>
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<tr>
<td>Foundation in Science</td>
<td>NUMed Foundation Certificate in Biological and Biomedical Sciences, with minimum CGPA</td>
</tr>
<tr>
<td></td>
<td>of 3.0. Monash University Foundation Year score of 300 or above. Other foundations should</td>
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<tr>
<td></td>
<td>be at least 12 months duration and will be considered on a case-by-case basis, with a</td>
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<td></td>
<td>minimum CGPA for 3.0.</td>
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<tr>
<td>All India Senior School</td>
<td>80%, based on average of best four academic subjects, including the required sciences of</td>
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<tr>
<td>Certificate</td>
<td>Biology and Chemistry.</td>
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<tr>
<td>Indian School Certificate</td>
<td>75%, based on average of best four academic subjects, including the required sciences of</td>
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<tr>
<td></td>
<td>Biology and Chemistry.</td>
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<tr>
<td>Indonesian UNI PREP/UNSW</td>
<td>CGPA of 8 to 8.5 as shown on the transcript, including the required sciences of Biology</td>
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<tr>
<td></td>
<td>and Chemistry.</td>
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<tr>
<td>Singapore Advanced Level</td>
<td>Minimum of 3 Bs at H2 level, or H3 level merit. Subjects should include Biology and</td>
</tr>
<tr>
<td></td>
<td>Chemistry.</td>
</tr>
<tr>
<td>Sri Lanka A level</td>
<td>12 points (3 Bs). We take the 3 highest grades offered, and these must include Biology</td>
</tr>
<tr>
<td></td>
<td>and Chemistry.</td>
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<tr>
<td>UEC</td>
<td>A score of 4 based on the average of the following subjects: biology, chemistry, physics,</td>
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<td></td>
<td>maths and additional maths, with none of these subjects achieving less than B4 (A1=1;</td>
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<td></td>
<td>A2=2; B3=3; B4=4; B5=5; B6=6; C7=7; C8=8).</td>
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<tr>
<td>International Baccalaureate</td>
<td>Normally a minimum of 30 points including the additional points available for the</td>
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<tr>
<td>Diploma</td>
<td>Theory of Knowledge/Extended Essay. No core subjects should be graded less than grade 5.</td>
</tr>
<tr>
<td>STPM</td>
<td>Normally BBB.</td>
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</tbody>
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The following will also be considered depending upon the grade(s) achieved: a polytechnic or university diploma, Ontario Grade 12.

Applicants offering qualifications other than those listed above should email admissions@newcastle.edu.my to check if their qualifications are acceptable or not.

If you accept an offer from NUMed Malaysia, you must provide us with original or certified copies of your qualification documents prior to commencing the course.

**English Requirements**

You must be proficient in both spoken and written English. You can demonstrate this through the IELTS test, or equivalent (e.g. TOEFL, MUET, SPM 1119). An IELTS minimum overall score of 6.5 with no individual band less than 6.5 must be achieved, MUET band 3 or better.

**Age Requirements**

You must be at least 17 years of age at the time of enrolment.

Other Requirements

All potential students are required to disclose at the time of application whether they have any criminal record which may make them unsuitable to study at NUMed Malaysia or Newcastle University, UK. You are invited to discuss with NUMed Malaysia the relevance of any caution or conviction you may have received at the time of application. We reserve the right to withdraw an offer if an applicant does not declare any relevant caution or conviction in their application. Also, NUMed Malaysia reserves the right to discontinue a student's studies if evidence of criminal activity comes to light during the course of their studies.

All potential students must also disclose, at the time of application, whether they have studied in the U.K. previously or had a U.K. Visa refused or terminated.

How to apply
Special Consideration/Disadvantage

Any statement regarding circumstances which may have seriously impaired your studies in the final year of your pre-university education that you may wish to put forward for special consideration must be submitted at the time of application. You should note that NUMed Malaysia will not give special consideration to such statements made at a later time.

Transfer from BSc (Honours) Biomedical Sciences to Medicine at NUMed Malaysia

Students on BSc (Honours) Biomedical Sciences programme may apply for transfer onto the MBBS degree programme offered by NUMed Malaysia at the end of the first year of study. This is a competitive scheme with a limited number of places and students are selected on the basis of academic performance in the first year, a personal statement and an interview. There are also graduate entry routes into medicine available at NUMed Malaysia and Newcastle University, UK.

Accepting an offer

Once you receive an offer of a place on the BSc (Honours) Biomedical Sciences programme you must follow the instructions below to confirm your place:

1. Accepting your offer

To accept your offer please complete the Reply to Offer form sent to you with your offer letter and return it by email to admissions@newcastle.edu.my by the date stipulated in your offer letter.

2. Confirmation of your acceptance

On receipt of your completed Reply to Offer form, an email will be sent to you from the NUMed Malaysia Admissions team confirming your acceptance, together with instructions for the payment of a deposit to secure your place.

3. Paying your deposit

Once you have accepted our offer, to secure your place you will be required to pay a deposit of RM5,000 which will be deducted from your first year fees.

Payment must be made by the date stipulated in your original offer letter. An official receipt will be issued to you once we have received payment.

If you have already completed your pre-university studies and your examination results meet our academic requirements for entry, your offer will be unconditional, and the deposit will be non-refundable.

If you are still studying for your pre-university examinations, your offer will be conditional upon you achieving the required grades/results set out in your offer letter. If you do not meet the conditions of the offer, your deposit will be refunded in full. However, if you have accepted our offer, and meet our conditions, but decide later not to study at NUMed Malaysia your deposit will not be refunded.

4. Next steps

Once we have received your deposit we will send you further Student Accommodation information.

You will receive our Welcome Pack and information on enrolment and induction in August 2017.
The study of Biomedical Sciences covers a diverse range of subjects relating to medicine and the understanding of life processes at all levels, from the molecular and cellular to the whole organism. New discoveries in Biomedical Sciences provide us with the prospect of finding new ways to prevent and treat a wide range of diseases that affect humankind. Biomedical Sciences considers the molecular and cellular processes that change the functioning of both the healthy human body and disease states arising from metabolic and genetic causes and infectious diseases. The molecular basis of cancer, its diagnosis and its therapy are also discussed along with issues such as stem cell therapy, animal cloning, and gene therapy. The BSc (Honours) Biomedical Sciences echoes the research strengths of the Faculty of Medical Sciences at Newcastle University and as such you will be exposed to the very latest ideas in medical research and you will learn how new scientific knowledge is formed and developed.

Outline of the Structure of 3-year BSc (Honours) Biomedical Sciences 2 + 1 Programme offered at NUMed Malaysia and Newcastle University UK

Our Biomedical Sciences programme is divided into two phases:

Phase 1 (Stage 1 and Semester 1 of Stage 2) and Phase 2 (Semester 2 of Stage 2 and Stage 3)

Note that the first two years of the programme (Stage 1 and Stage 2) will be taught at NUMed Malaysia and the third year (Stage 3) of the programme will only be taught at Newcastle University, UK. In order for you to progress to the third year of the programme in the UK, you must have successfully completed the first two years of the programme in Malaysia and have obtained the relevant visa for you to enter the UK. Please note that although Newcastle University and NUMed Malaysia will make every effort to assist you with your application to obtain a visa to enter the UK, this cannot be guaranteed and you are advised to read carefully the guidance for obtaining a visa at: http://www.ukba.homeoffice.gov.uk/visas-immigration/studying/adult-students/apply-outside-uk/

NUMed Malaysia:
Phase I (Stage 1 and Stage 2 Semester 1)

Phase 1 extends over the first 1½ years of the programme and is divided into two Stages. Phase 1 provides a broad introduction to biomolecular sciences and therefore gives you the chance to try a broad range of topics, helping you to see where your interests lie before you study your specialist optional biomedical sciences modules in Phase 2. Each Stage lasts for an academic year and you need to complete modules totalling 120 credits by the end of each Stage to progress to the next year.

Phase 1 consists of the study of the following modules:

STAGE 1

Biochemistry (15 credits) examines the structures of macromolecular components of the cell, including proteins and nucleic acids, with emphasis on the diseases arising from defects in these components.

Cell Biology (15 credits) covers the roles of membranes, cellular interactions, particularly in nerves and muscles, along with hormones and other forms of intercellular communication that integrate cellular function.

Genetics (15) explains the basis of heredity and shows how genetic analysis can be accomplished in a range of organisms, but with emphasis on human genes.

Microbiology and Immunology (15) emphasises the role played by microorganisms in disease and describes the range of recognition and effector systems employed to defend the body against infection.

Pharmacology (15) introduces the principles underlying the rational use of drugs in the treatment of a wide range of medical conditions, explaining what drugs do to the body and what the body does to drugs.

Physiology (15) involves the study of body function with emphasis on how organs and tissues work, on control mechanisms, and on how the body responds to changes in the environment.

Practical skills in biomedical and biomolecular sciences 1 and 2 (15 credits each) introduces practical laboratory skills and generic skills including scientific writing, IT, and presentation skills.

STAGE 2 SEMESTER 1

Principles and practice of molecular techniques (20) provides an integrated approach to studying modern molecular biological techniques, bioinformatics statistics and ethics.

Control of eukaryotic gene expression (10) Covers mechanisms whereby eukaryotes regulate gene expression.

Cell biology and disease (20) Gain an understanding of how post translational a cellular events lead to normal tissue function or disease.

Cell and molecular biology of the immune system (10) covers the underlying molecular & cellular events that lead to specific immune responses.
NUMed Malaysia:
Phase 2 (Stage 2 Semester 2)
In Phase 2 you study a range of topics relating to health and disease. In Stage 2, Semester 2, you cover the immune system in relation to various types of human disease, the nervous system, respiratory diseases including bacterial and viral infection, and human anatomy. In Stage 3 you choose from modules offered by our research institutes that cover disease-related topics including cancer, diseases of the nervous system, the genetics of common disease, chronic and nutritional-related disease, medical bio-technology, and biology of ageing. You also undertake an individual research project in an area of Biomedical Sciences that particularly interests you. This may be a laboratory project in one of our internationally rated research institutes, a clinical study under the supervision of one of the medically qualified staff, a project working with a local school or college, or an IT-based project. Finally you may also choose a vocational module, such as research in biomedical sciences, business for the bioscientist, science communication, or healthcare organisation and practice.

STAGE 2 SEMESTER 2

The nervous system and respiratory diseases (20) covers two strands. The neuroscience strand builds an understanding from basic cellular neuroscience through to behaviorally relevant function of network activity in the central nervous system (CNS). The respiratory strand develops a students’ understanding of the physiology of the lung, the molecular pathology and pathogenesis of a range of lung diseases and the diagnostic tools and treatments available for these diseases.

Clinical immunology and viral pathogens (20) covers two strands. The clinical immunology strands considers the role of the immune system in human disease and the virology strand considers the ways in which viruses cause human disease.

Human anatomy (10) develops a core knowledge and understanding of human anatomy.

Practical and presentational skills in biomedical sciences (10) enhances a students’ practical skills in immunology and bacterial pathogenicity and develops a students’ written, oral and presentation skills.

Student Profile

Chow Min Yee
BSc (Hons) Biomedical Sciences
Stage 2

I feel lucky that I have made the right choice to take the BSc (Honours) Biomedical Sciences (BMS) degree programme in NUMed. I believe that Newcastle University which has a good reputation and high world ranking is able to provide good quality education and professional training for me in the field of Biomedical Sciences.

I enjoy my study life in NUMed in gaining knowledge from my dedicated lecturers who are always willing to help and guide me in my studies. I also enjoy the practical sessions which allow me to apply the knowledge that I gain from my lectures in the laboratory. From the practical sessions, I get to learn basic lab techniques and gain hands on experience in dealing with different lab equipment.
Newcastle UK: Phase 2 (Stage 3)

STAGE 3 SEMESTER 1
You will study three modules, one from each of the following lists:

List A
Clinical ageing and health (20) considers firstly how and why older people become ill and discusses the epidemiology and pathology of a range of chronic diseases of the elderly. Further to this the module will consider issues around the care of the elderly and the impact of an ageing population on the UK and developing countries.

or
Immunology of Health and Disease (20) examines human immunity in health and disease. Newcastle University has considerable research activity in these areas and this module will focus on examining recent findings and techniques, including those obtained from immuno-compromised patients.

or
Epidemiology Introduces the methodologies underpinning epidemiological studies with selected examples focused on disease and public health issues.

List B
Chronic disease (20) considers a number of classes of disease and will highlight the underlying molecular physiology/biochemistry and/or behavioural factors that lead to these diseases.

or
Cancer biology and therapy (20) provides a background to the molecular basis of cancer and its therapy. The various causes, cellular and genetic processes central to the development of cancer will be discussed, alongside how this understanding is being exploited for disease detection, diagnosis and therapy.

or
Disease of the human nervous system (20) provides firstly an overview of the cellular anatomy, biochemistry and function of the human CNS, providing a framework to help you understand the second part of the module where preclinical and clinical lectures, together with molecular pathology, will highlight the various diseases associated with the CNS.

List C
Genetics of common diseases (20) address one of the major areas of current medical research and provides students with an understanding of the strengths and weakness of both the current subject knowledge in this area and the practical approaches to it. Understanding the genetics of common (complex) diseases has been identified as a major post-genome challenge.

or
Medical biotechnology (20) informs students of the range of therapeutic molecules and diagnostic tools developed by the biotechnology industry over the last few years and identifies and explores new areas of research in the biotechnology industry.

or
Microbiota and pathogens: Mucosal Microbiota, Protozoa and Fungi (20) builds upon the students’ knowledge of basic microbiology and will develop their understanding of the molecular cell biology and evolution of the human microbiota and its role in health and disease in relation to selected pathogenic viruses, bacteria, protozoa and fungi. The module will provide an up to date review of the molecular cell biology and evolution of the human microbiota and pathogens and the interplay between them by focusing on selected bacteria, protozoa and fungi.

STAGE 3 SEMESTER 2
Research Project (40) provides an opportunity to undertake a piece of original research in a top-rated research laboratory in the Faculty of Medical Sciences, to write a dissertation based on the latest developments in a particular area of research, or to undertake an education or business-related project.

or
Experimental design and the process of research (40) is aimed at students who are interested in pursuing a laboratory-based career. At the core of the module is a hypothetical workplace scenario, which forms the basis of an extended practical project.

Integrated biomedical sciences (10) develops a students’ ability to design experiments and interpret scientific data.

Vocational module (10) This can be any one of the following modules - Research in Biomedical Sciences, Business for the Bioscientist Healthcare Organisation and Practice, Science Communication, Bioethics or Bioinformatics.
Teaching and Learning

The BSc (Honours) Biomedical Sciences programme is delivered at NUMed Malaysia under the authority of Newcastle University UK and the teaching, learning and assessment is equivalent to that which students studying in the UK receive.

The programme is taught through a mixture of lectures, practicals and small-group seminars. In seminars you may discuss the ideas covered in the lectures and the practicals, work through case studies, or have detailed discussions of recent research papers. Throughout the course we emphasise the development of key skills such as oral and written presentation, teamwork and problem solving. We also ensure that you become competent in the use of computers for word processing, statistics, graphic presentation, data handling and analysis and literature searches.

Research Projects

The final-year project is the highlight of the programme and allows you to spend a period of time working on an original piece of work. The majority of students choose to do their project work in one of our seven research institutes, supervised by and working alongside leading scientists in their field. Some students choose to do a project of a different sort tailored to their own vocational aspirations. For example, you may undertake a clinical project, an educational project or a business-related project. Projects undertaken by our students cover a diverse range of topics and may lead to scientific papers or patents.

Assessment

Assessment is based upon various course assignments and end of semester and/or end of year examinations. A major component of the final year is your research project which accounts for one third of the marks at Stage 3.

You are expected to demonstrate the appropriate level of attainment before being allowed to progress to the next Stage. The assessment process is designed to encourage and reward transfer of learning from one Stage to the next.

You will receive continuous feedback on your performance throughout the course.

Degree Classification

Candidates will be assessed for degree classification on the basis of all the modules taken at Stage 2 and Stage 3 with the weighting of the stages being 1:2 for Stage 2 and Stage 3 respectively.
Student Life at NUMed Malaysia

At the beginning you may find life at university a little daunting as you come to terms with the more independent life you will lead away from home. First, this is quite normal and you are not alone - others will feel the same as you! One of the best ways to help you settle into your new life is to make new friendships and join in with the existing student social networks. This section of our brochure is designed to provide you with some more general and practical information that will help you to settle in.

The Campus

The permanent purpose-built NUMed Malaysia campus is set within the EduCity Iskandar Malaysia development http://www.iskandarinvestment.com/educity-partners/ in Iskandar Puteri, Johor. This dedicated international higher education hub is located 1km east of the Gelang Patah Interchange on the main Second-Link Expressway. The Second Crossing Bridge to Singapore is only 9km from the site, and the city of Johor Bahru, 25km to the east is easily accessed via the newly opened Coastal Highway. Singapore’s Changi International Airport is a 45-minute drive away and we are just 20 minutes from Johor’s Senai Airport. Opened in 2011 by His Royal Highness Prince Andrew, the Duke of York, our 5.5-hectare secure campus is designed to replicate the look and feel of Newcastle University in the UK, and comprises over 15,000m² of academic space housing state-of-the-art facilities and innovations in medical and scientific learning and teaching technology.

Our facilities include lecture and seminar rooms, a laboratory and clinical skills complex, the learning resource centre, and the student cafeterias, dance studio and recreation centre. The centrepiece of the campus, and at the heart of your learning is the Learning Resource Centre. Constructed around the medical library facility, this innovative building is modelled on a number of emerging, ground-breaking facilities at other International world-class higher education institutions. Over three floors, the Centre is largely open plan to provide you with a range of flexible learning spaces, supportive of different kinds of study, and a relaxing environment helpful to learning.

These spaces include ‘quiet zones’ for self-directed study, study rooms for group work, and other social learning areas, which you will be able to rearrange to suit your preferred style of study. More formal spaces are also included for practice presentations. There are two large IT clusters, and the entire campus has access to a high-speed wireless network. Our dedicated electronic virtual learning environment (Blackboard) allows you on-line access to the entire curriculum and associated learning resources, whether you are on or off campus, as long as you have an internet connection. Recapped (recorded) lectures are also made available via Blackboard. The learning environment we provide here at NUMed Malaysia goes beyond our excellent physical resources as the framework of your learning is fully supported by the organisation and culture of Newcastle University, UK. A wide range of factors contribute to making NUMed Malaysia an ideal place to study including our institutional goals, the high value we attach to supporting your learning, the close relationships between you and the faculty, the individual attention you receive, and the personal feedback we provide on your progress. Overall we believe that NUMed Malaysia provides you with an environment which encourages your learning, which is safe and secure, fosters collaboration, values the contribution of individuals, and is based on mutual respect.

Student Support and Guidance

Our strategy for your support and guidance is based on the provision of clear and timely information, academic guidance and individual tutorial support, backed up by a comprehensive network of personal support ranging from peer mentors through personal tutors to professional counsellors.

You are provided with Study Guides for each module. These indicate what you should learn and how this learning can be achieved. They provide you with learning outcomes, details of the programme of study, and guidance to support self-study, including self-assessment.

A member of staff at NUMed Malaysia is allocated to you as your Personal Tutor to offer general academic guidance and pastoral support. In addition, the NUMed Malaysia Student Association operates a ‘peer-parenting’ system whereby every new student is attached to a ‘family’ of senior students who are available to offer advice and guidance.

We take full advantage of our state-of-the-art communication and information technology to provide additional support throughout the learning process. NUMed Malaysia’s interactive electronic Virtual Learning Environment ‘Blackboard’ is available to help you in all aspects of your learning. This ‘Environment’ includes all programme documentation, electronic portfolios, student forums, assessment information, and access to online learning resources. You are able to access the ‘Environment’ both on and off campus, and full training is provided in its use.

Your input to the development of our curriculum is very important to us and many changes have been introduced in response to student feedback. There is a Staff-Student Committee for each Phase of the curriculum, and the student members play an important role in managing the curriculum and its development.

Student Accommodation

NUMed has its own managed student accommodation. The new accommodation offers high-quality self-catering apartments, arranged as a number of study-bedrooms sharing a central kitchen/living room and shower facilities. The air-conditioned apartments also have free wireless Internet access. There is a swimming pool and gymnasium on-site, to which all students staying in the accommodation have free access.

Each apartment is self-catering and is equipped with its own fridge, cooker and washing machine. The NUMed Student Accommodation offers a partial cleaning service for public areas and kitchen. Students are responsible for cleaning their own study-bedrooms. Each apartment houses up to four students.

NUMed Student Accommodation is truly multinational, multi-ethnic and multicultural. The new accommodation is just a 10-minute drive from the campus, with free, regular transport provided, not only between the accommodation and the campus, but also between the accommodation and the nearby major eateries, shopping centres, entertainment outlets and other recreational attractions, which are five minutes’ drive away.

These new apartments will be managed by NUMed and you can therefore expect a responsive and efficient service.

The apartments are within a gated community, with 24-hour, non-intrusive security. There is a NUMed Security Office on-site, with NUMed guards on hand 24 hours. Accommodation and Hospitality Services are committed to providing services and facilities that enhance your experience and you can be assured of our support and attention at all times.

More detailed information about the accommodation is available at: http://www.ncl.ac.uk/numed/support/living/accommodation
Alternative Accommodation

There are alternative accommodation options in the area; visit the NUMed website to find out more: [www.newcastle.edu.my/support/living/accommodation](http://www.newcastle.edu.my/support/living/accommodation).

Whichever accommodation option you choose, you should book early as rooms are limited and are allocated on a first come, first served basis.

Living Expenses

Living expenses depend on your financial resources, tastes and interests, and you are advised to set a budget according to your own individual needs.

As a guide, including your accommodation, we estimate that you should allow around RM2,000 per month to cover your living costs in Johor.

Recreation and the EduCity Iskandar Malaysia Sports Complex

As a NU Med Malaysia student you will have access to both the sports, social and recreational facilities provided on campus, and to those provided by EduCity Iskandar Malaysia.

The common facilities shared by all students at EduCity, include a world-class stadium and sports complex, which opened in August 2013. The sports complex includes:

- outdoor arena and pitches for field sports and athletics
- indoor arena and facilities for sports such as badminton, volleyball, etc.
- gymnasium
- 50m swimming pool

NUMed Malaysia Student Association

The model of student government for NUMed Malaysia is the same as that of the Medical School at Newcastle University, UK.

The purposes of the Student Association are two fold:

- It is the representative body for the student community in dealings with the academic leadership of NUMed Malaysia.
- It oversees the running of the many student societies, clubs and other organizations.

The Student Association nominates representatives to serve on NUMed Malaysia committees, and supervises and coordinates co-curricular activities.

As well as organizing entertainment and activities for the student body, the Association also runs campaigns on issues affecting students, and participates with the local health authorities in delivering health promotion and awareness to the local community.

For more information please visit the Student Association Facebook page at: [https://www.facebook.com/numedSA](https://www.facebook.com/numedSA)
Student Life at Newcastle University UK

Your third year of studies will be carried out at Newcastle University in the North East of the United Kingdom. We realise that continuing your studies in a new country and on a new campus will be both an exciting and daunting time. The University has a wide range of support services that can help you with your transition to study in the UK. Before you arrive in Newcastle we will send you pre-arrival information with details of our Welcome Service and a copy of our International Student Handbook.

We have a free collection service for our international students who arrive at Newcastle Airport and an orientation programme which is a fun way to find out more about living and studying at Newcastle, to make friends, and to meet staff. This section of our brochure is designed to provide you with some more general and practical information that will help you to settle in when you arrive in the UK.

The Campus

The majority of our teaching and learning activities will take place at our 20.25-hectare city centre campus that is right in the heart of Britain’s favourite student city. This campus represents the hub of Newcastle student life, bringing together the main teaching facilities including the Faculty of Medical Sciences, where you will be based, and a wide range of student facilities. We recommend that you travel to Newcastle International Airport, which is only about 11km north-west of Newcastle, direct via Dubai, Amsterdam, Brussels, Copenhagen or Paris, to avoid passing through London where transiting is difficult. Newcastle is also located on the main East Coast main train line and has good links with most other towns and cities in the UK.

Newcastle University Medical School was established in 1834 and by the 1990s the Medical School had become one of the largest in the UK, with a reputation for patient-directed research and for innovation in the teaching of medicine and science. The Faculty of Medical Sciences at Newcastle University Medical School now consists of four academic schools (School of Biomedical Sciences, School of Dental Sciences, School of Medical Education and the School of Psychology) and seven Institutes, which are centres of research excellence, based on sites throughout the Newcastle area.

The School of Biomedical Sciences is located in newly refurbished accommodation in the Leech and Cookson wings of the Faculty of Medical Sciences. Accommodation includes a dedicated School Support Office, with an Administrator and eight secretarial staff. We also have a team of six technical staff who support our undergraduate teaching. The School has four large teaching laboratories and an undergraduate resource room. There are 6 Lecture theatres in the Faculty accommodating between 100 to 450 students. All of our lecture theatres have undergone recent refurbishment and include state of the art audio visual aids, along with a state-of-the-art lecture recording system (Recap) that can record lectures (slides and voice) to help support your studies. There are also a number of seminar rooms/classroom for small group teaching accommodating up to 40 students each.

The School of Biomedical Sciences draws on staff in the Research Institutes in the Faculty to teach at all levels of our programmes ensuring that our degree programmes reflect the very latest developments in Biomedical Research.
The Walton Medical Library, which is part of the University Library, is located on the 5th Floor of the Faculty of Medical Sciences and carries an extensive stock of books and journals relating to all the taught modules and the research of the Faculty. The Faculty also has four computer clusters with between 20 and 90 PCs each for the use of students. All clusters are open between 9-6pm Monday to Friday with one cluster having 24-hour access. There is also an undergraduate common room and cafeteria located on the ground floor.

Studying at Newcastle University is the passport to a whole world of opportunities. We believe in providing an education for life, giving you access to skills and experience that will be of tremendous value throughout your University career and beyond. We provide hundreds of opportunities inside and outside the curriculum to boost your personal development, cutting edge facilities, dedicated staff and some of the best teaching in the UK.

As with NUMed Malaysia we believe that Newcastle University provides you with an environment, which encourages your learning, which is safe and secure, fosters collaboration, values the contribution of individuals, and is based on mutual respect

**Student Support and Guidance**

At the start of Semester 2 of your second year of studies at NUMed Malaysia you will be informed of your third year options and a detailed session about these options will be delivered before the Easter Holidays by the local Newcastle University Medicine Malaysia Dean of Biomedical Sciences. In addition the recorded option briefing session delivered at Newcastle University, UK by the relevant module leaders will be made available to students at NUMed Malaysia so that you can make an informed decision regarding final year module choices.

Towards the end of your second year of studies you will attend a compulsory induction programme detailing your final years studies at Newcastle University, UK and you will be given full details of principle staff at Newcastle University, UK and the accommodation and support services that will be available.

Students in Malaysia will also be assigned a Newcastle University, UK tutor at the start of Semester 2 Year 2 in addition to their tutor at NUMed, and you will be encouraged to contact your tutor in Newcastle by email, Skype and/or video-conferencing prior to starting in the UK. In addition Skype or video-conferencing will be used to introduce senior staff from Newcastle University, UK to second year students in Malaysia.

During the induction week of your first semester at Newcastle University, UK you will attend a general induction session to your studies, a session on student support and services, and a general study skills session, which will be delivered by the Head of the School of Biomedical Sciences, and the Deputy Head. General information about your programme, as described in the Degree Programme Handbook will also be provided. In addition, a separate induction to IT at Newcastle will also be arranged. Students will also be inducted with the continuing students at Newcastle University, UK with respect to detailed programme information, and the timetable of lectures/practicals/labs/and tutorials/etc. by the Chair of the Biomedical Sciences Curriculum Committee at Newcastle University, UK, and you will be introduced to the final year project by the module leader.

“Choosing to study Biomedical Sciences (BMS) at Newcastle University Medicine Malaysia (NUMed) is one of the biggest (also one of the greatest) decisions I have ever made. Choosing NUMed means I will be studying in Johor for the first two years of my degree before continuing my final year in the United Kingdom!

There is also the ReCap system whereby the lectures are recorded. Therefore, we can always revisit parts of the lectures that we do not quite understand when in lectures.”

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**Student Profile**

Ng Yi Min

BSc (Hons) Biomedical Sciences

Stage 3
Student Accommodation

When you arrive at Newcastle University, UK, if you wish, you will be guaranteed a place in our University student accommodation. We have a range of competitively priced accommodation to choose from - all within easy reach of the campus and the city centre and a dedicated Accommodation Service to help you find the place that is right for you and your requirements. Staying in University accommodation gives you the chance to make new friends and enjoy being part of a supportive community as you settle into life in a new country. We have traditional halls of residence and a number of purpose built flats. We can also advise you on private accommodation if you do not wish to stay in University accommodation.

Indicative weekly room rates for the Newcastle University accommodation range from £570 per week for a single room with shared facilities, to £695 per week for a single room with personal en-suite facilities.

More information on the Newcastle University Accommodation Service can be obtained from at:
http://www.ncl.ac.uk/accommodation

Living Expenses

Living expenses depend on your financial resources, tastes and interests, and you are advised to set a budget according to your own individual needs.

As a guide, including your accommodation, we estimate that you should allow around £6,000 per month to cover your living costs in Newcastle.

Sport at Newcastle University, UK

We have a strong sporting reputation at Newcastle University UK having finished in the top 10 out of 148 Higher Education institutions in the British Universities and Colleges Sports (BUCS) table in 2014/15 (that is a top 15 finish in the last eight years). It does not matter whether you are an international athlete or an absolute beginner, it could not be easier to make sport part of your student experience at Newcastle.

We have more than 60 student led sports clubs at Newcastle University and they cover a wide range of competitive and recreational sports under the banner ‘Team Newcastle’. Our indoor facilities are located in the Sports Centre on campus and include 125 health stations, a dance studio, four squash courts, a double court sports hall, two multi-purpose rooms and a strength and conditioning suite (gymnasium). The University’s outdoor sporting facilities are located just a short distance from the campus and include a range of high quality pitches for football, rugby, tennis and lacrosse as well as two all-weather floodlit pitches. Students can also join our rowing and canoeing clubs, which are based at our water sports centre on the banks of the Tyne River.

Newcastle University UK Students’ Union

Newcastle University Students’ Union (NUSU) is a gateway to a whole variety of different experiences to help you meet new people, discover new interests and develop valuable new skills.

The Students’ Union is run by and for students. The role of the Union is to represent the entire student body and there are lots of ways of you becoming involved including becoming a course representative.

The Students Union re-opened in autumn 2011 after an £8 million refurbishment to its home in the heart of the campus. There are now computer clusters with 24 hour access, special study pods and a brand new student advice centre. The Students Union also supports more than 200 student societies and sports clubs covering different sports, subjects and cultural interests.
After You Graduate

Upon successful completion of the entire programme you will be awarded **BSc (Honours) Biomedical Sciences**, which will be conferred by **Newcastle University UK**.

**Career Paths**

There is a great demand for graduates in the biomedical and biomolecular sciences within the health services and industry, leading or working as part of research teams, and many of our students choose this career path. Industries employing bioscientists for research and development include: pharmaceuticals; biotechnology; chemical; cosmetics and toiletries; and food and drink. With a biosciences-related degree you could undertake medical, veterinary and agricultural research in universities and research institutes. Hospital and public health laboratories also employ a large number of bioscientists.

A significant proportion of our graduates choose to take a further degree (either an MSc or PhD) before embarking on permanent employment. This is a step in a career path that can lead to senior, decision-making roles. Each year a number of our students use our degrees as a route for graduate entry into medicine or dentistry.

Apart from laboratory work, there are many other ways to use your degree. Some of our graduates choose to enter the legal side of the subject, using their scientific knowledge to advise on patenting, whilst others opt for careers such as scientific journalism.

Our graduates also embark on careers unrelated to the biomedical sciences, in management, accountancy and IT, for example. Whichever career you choose, you can be sure that you will receive our advice and wholehearted support.

As an alumnus of NUMed Malaysia and a Newcastle graduate, you are entitled to become a member of our Graduate Society and Newcastle’s Alumni Association.

Contact Us

You can find more information on our website at http://www.newcastle.edu.my

**To contact NUMed Malaysia:**

Email admissions@newcastle.edu.my

Telephone +607 555 3800

H/P +6012 784 9456/+6011 1231 5411

Twitter: https://twitter.com/NUMedMalaysia

Facebook: https://www.facebook.com/NewcastleUniversityMedicineMalaysia

Location Map

http://www.ncl.ac.uk/media-files/tour/NUMed_2015/
A Degree in Biomedical Sciences

Financial sector
Bioscience graduates are successful in the financial sector because of the intellectual discipline that scientific training will give you. Accountancy, investment banking, insurance, and management consultancy are some of the options in this diverse sector.

Industrial science
A wide range of careers are open to our graduates in scientific companies. Roles in research and product development will directly use scientific knowledge and skills and we talk to the key employers regularly to ensure our graduates are "fit for purpose". The UK has a strong and fast-growing life sciences sector with particular strengths in research and development.

Academic research
After your degree a new world of masters and doctoral qualifications opens. Research in universities is conducted into all kinds of questions and you can expect to make a contribution to the generation of new knowledge at an early stage. With funding to pursue your own research interests you could build a team of research students and staff and work with companies, clinicians and other scientists around the world to advance the biosciences.

Sarah - PhD Student

Teaching
Probably the most familiar of all the careers we mention here, teaching is a great way to use your degree, stay in science and work in a rewarding career which is never the same from one day to the next.

Zoe – science teacher

I love my career because....
I love seeing the pupils’ development, teaching feels like I am making a valid contribution to a young person’s life. Biology was a subject I loved at school and it is fulfilling to see my pupils engaging with the subject. I especially enjoy seeing the pupils leave with their desired results.

Suzanne - Research Scientist

I love my career because....
I believe there isn’t a more noble profession than to save or improve the quality of a person’s life. Research at Newcastle has enabled me to learn from specialists at top universities, to collaborate with pharmaceutical companies and travel internationally to countries such as America for conferences and workshops.

Kim - Clinical Data Team

I love my career because....
I am enthusiastic about employing graduates of all disciplines, as long as they have good administrative skills and information. Attention to detail is critical, as are people skills to communicate with medical doctors, researchers, patients and others or any manner of tasks – these roles are very diverse, but the reputation of our graduates is always good.

David – Account Executive

This will appeal to you if...
You are interested in a commercial working environment and have good numeric skills. Most financial employers employ graduates in roles with a high degree of customer or client liaison, so your communication and interpersonal skills are also key. Duncan – Fund Manager

This will appeal to you if...
you are keen to use your scientific skills in your career to develop products and therapies to improve quality of life and health care. Scientific teamwork skills are essential in these roles, so you ensure our degrees give you many opportunities to develop them. We can also help you to secure a year’s placement in industry giving you a huge advantage on graduation. Suzanne - Research Scientist

Sarah - PhD Student
What next?

Medical and Dentistry
Many students go on to apply for graduate medicine and dentistry, either the full course or via accelerated programmes. Help with the application process is provided by the School via talks from alumni, UCAS support sessions and personal statement clinics.

I love my career because....
My Biomedical Sciences degree has provided me with solid foundations for a career in Medicine, I felt inspired by my three years at Newcastle University and have been fortunate in being able to apply my skills to the clinical environment.

Simon – 4th Year Medical Student

Clinical Research and Trials
UK companies, universities and hospitals generate many of the new drugs and therapies emerging globally each year. Each potential new treatment must go through an extensive clinical trial before launch, managed in pharmaceutical companies, specialist contract research organizations (which offer entry level positions to new graduates), universities and hospitals. After training, clinical research associates (CRA) can also work as freelancers, giving extra career flexibility.

This will appeal to you if...
you have good organisational and administrative skills and enjoy working with data and information. Attention to detail and good writing skills are critical, as are people skills to communicate with medical doctors, researchers, patients and companies. With the option to spend a year in industry, if you are interested in this area we will help you look for suitable placements.

Kim - Clinical Data Team Leader

Healthcare Scientist
Work with NHS medical staff to help investigate, diagnose and treat diseases by analysing samples and developing new techniques to improve services to patients. An extensive training programme and great promotion prospects mean that top healthcare scientists are high-flying professionals within the NHS, managing large labs and providing advice at health board and even governmental level.

This will appeal to you if...
you enjoy organising things, managing others or any manner of tasks – these roles are very diverse, but the reputation of Newcastle University and the quality of our Careers Service means that you’ll have a chance to meet many of the employers who choose to visit us to meet our students and explain their opportunities in person.

David – Account Executive

Commercial roles
Businesses in all employment sectors and of all sizes are enthusiastic about employing graduates of all disciplines, as long as they have a sound degree and good transferable skills. Roles include sales, finance, marketing, human resources, IT, logistics, purchasing and general management.

I love my career because....
I get to do science every day while aiding clinicians in the diagnosis of patients with rare genetic disorders. It’s great to know I’m helping the understanding and medical management of the patient’s condition.

Laura - Trainee Clinical Scientist
Newcastle: The UK’s favourite city*