STEM Careers

Newcastle University

Technology Careers
Software developer
Web developer
IT consultant
Data analyst

Science Careers
Biologist
Chemist
Maths Careers
Actuarial analyst

Engineering Careers
Civil engineer
Electrical engineer
Biomedical engineer

Benefits of a STEM Career
High salary
Job satisfaction

Studying STEM at Newcastle University

Researcher
STEM Careers
What is STEM?

- Science
- Technology
- Engineering
- Maths
Science Careers

Science communicator
Marine ecologist
Microbiologist
Information analyst
Science teacher
Nutritionist
Museum curator
Brewery manager
Food Buyer
Researcher
Pharmaceutical manufacturing

Wildlife conservationist

Fran, BSc Zoology (2004)
Wild Woods Project Officer
Durham Wildlife Trust

Zoology Degree
Year out travelling
Gateshead Council Countryside Project
Wild Woods Project Officer

To as much voluntary work as possible; get involved with local groups. Sometimes it’s who you know not what you know.
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Technology Careers

- Software developer
- Web developer
- Researcher
- IT consultant
- Graphic designer
- Game developer

Nino, Computer Game Engineering MSc (2017)
Junior Tools Programmer
TT Games

Physics degree → Computer Game Engineering MSc → TT Games part-time while studying → TT Games full-time

"The games industry had never occurred to me as a career option but I already spent a large amount of my time playing video games and figured it'd be pretty awesome if I could have a career in the industry."
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Marine Engineer
Gareth, Marine Technology BEng (2003)
Global Maritime Consultancy

Engineer for P&O Cruises
Private Yacht Engineer

Global Maritime Consultancy

Do something you enjoy and challenge yourself

Consultant

Electrical engineer

Offshore surveyor

Engineering Careers

Pipeline engineer

Army officer

Civil Engineer

Land surveyor

Biomedical engineer

Roles:
- Combining medical knowledge with technical expertise
- Designing new artificial joints, investigating new materials to assist in the repair of the soft tissues, reviewing effectiveness of rehabilitation treatments

In 2015, Newcastle University was given £1.4m for their bionic limb project. They have produced a prosthetic hand that can sense pressure and temperature and send the information back to the brain. It has been tested by NHS patients.
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Data analyst

Katie, Mathematics and Statistics MMaath (2014)
Cancer Research UK

“I work on analytical projects to support Cancer Research’s priorities relating to cancer prevention, early diagnosis and access to treatment. In addition to these analytical projects, we also generate cancer statistics for the UK and local areas”

Think outside the box – Maths is in lots of different industries
Researchers work in universities, charities, government and private companies

Examples of some of the research happening at Newcastle University:

• Protecting and Restoring Coral Reefs (Marine Biology)
• Human Computer Interaction (Science Central)
• Bionic Arm (Computer Science)
• Managing global water Supplies (Civil Engineering)
Benefits of a STEM Career

Higher Lifetime Earnings

Graduates on average earn £9,500 more per year than non-graduates.

BSc grads earn 10% more than those with BAs.

Job Opportunities

There is a national shortage of STEM professionals, so plenty of job opportunities for graduates. In 2018, 2.4 million STEM related jobs will go unfilled.

- Quantity surveyors (77% vacancies unfilled)
- Mechanical engineers (72%)
- Electricians (64%)
- Nurses (58%)
- R&D managers (37%)
- Programmers/software developers (36%)
- Financial accounting technicians (54%)
- Estimators, valuers, assessors (55%)
- Engineering technicians (51%)
- Civil engineers (50%)
- Design/development engineers (40%)

Beck Hess 2018 STEM Demand Skills Survey

Opportunities To Work In Different Areas

50% of grad jobs do not require a specific degree.

Develop Skills

Teamwork

Time Management

Technical

Communication

Independence

Analytical

Problem Solving
Develop Skills

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- Engineering technicians (50%)
- Civil engineers (50%)
- Design/development engineers (49%)

Source: UKCES3:Excellence Skills Audit 2013

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Source: World Education Skills survey 2013

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Studying STEM at University

STEM Courses

- High contact hours
- Small class sizes
- Practical opportunities
  - Interesting and enjoyable
- Varied career options

Life of a STEM Student

Timetable
STEM Courses

- High contact hours
  - Small class sizes
- Practical opportunities
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Life of a STEM Student

Timetable

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Assessments
- Exams
- Laboratory and field reports
- Essays
- Presentations
- Posters
- Group work
- Computer assessments

Study abroad
- Boost your CV
- Meet new people
- Learn a language
- Experience a new culture

Placement year
- Gain confidence
- Transferable skills
- Try out new career

University Careers Support
- Workshops and events
- One-to-one sessions
- Drop-in sessions
- Online resources
- Information about different careers
- Graduate destinations

Sports and Societies
- 55 sports clubs
- 26 societies, including football, tennis, badminton, rugby, karate, cycling, and more
- LGB+ society
- First year social events
- University of Manchester sports and university societies

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Study abroad

• Boost your CV
• Meet new people
• Learn a language
• Experience a new culture

Placement year

- Gain confidence
- Apply knowledge
- Try out a career
- Secure a grad job
- Earn a salary
Sports and Societies

65 sports clubs
  e.g. football, mixed martial arts, ice hockey, korfball
  Intramural, beginner and elite levels - compete in BUCS

160+ societies
  e.g. yoga, 20 minute society, NUTS, gaming society

If there isn't one you like, you can set up your own!
University Careers Support

Newcastle has an award-winning careers service and you can benefit for up to three years after you graduate

- One-to-one advice
  - Appointment and drop-in

- Workshops and events
  - How to write the perfect CV
  - Employers on campus
  - Business start-up masterclasses

- Online resources
  - Vacancies online
  - Information about different careers
  - Graduate destinations
Accredited degrees

Accreditation is a set of standards a degree must meet. Some companies will only consider graduates with accredited degrees. Accreditation is awarded by professional governing bodies. At Newcastle University, most of our degrees are accredited.

Work experience

Opportunities to enhance your employability

Volunteering

Career development module

NMCL

Stem opportunities in the North East

43% of Newcastle graduates choose to stay in the North East after graduating
- Merck - Pharmaceuticals
- Siemens - Electromens
- P&G - Engineering
- Code Gaming - Computer Science
- Northern Institute for Cancer Research
- Centre for Life - Neuroscience Research
- Rigby - Physical Science Software
- Northumbrian Water
- P&G - Software
- Astra Zeneca - New Building Services
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- Northern Institute for Cancer Research
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- Sage - Financial Systems Software
- Northumbrian Water
- R&R Ice cream
- Atom Bank - New Banking Business
Why Newcastle?

- Top 200 World Universities
- Member of the Russell Group
- Teaching Excellence Framework Gold status
- 11th in the UK for academic experience
- No1 must-see destination in World for 2018
- 4th in the UK for quality of student life