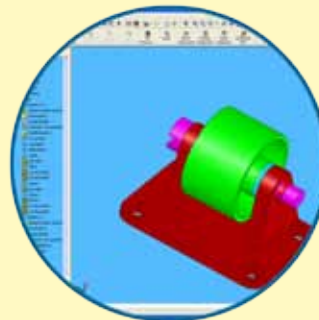


**GET
AHEAD**



Engineering Course Information

www.nwrc.ac.uk



Introduction

The School of Construction, Engineering and Science has a long tradition of delivering Engineering courses ranging from the basic BTEC Level 2 to the advanced BTEC Level 5 programmes.

The Engineering section has a range of modern, well equipped laboratories together with a research and development facility for local industry. As a student you will have the chance to use the latest engineering software packages and to work with the type of equipment used in industry.

What is Engineering?

Engineers apply the principles of science and mathematics to develop economical solutions to technical problems. Their work is the link between scientific discoveries and the commercial applications that meet the needs of the consumer or society in general. Many engineers develop new products. In addition to design and development, engineers work in testing, production, or maintenance. These engineers supervise production in factories, determine the causes of component failure, and test manufactured products to maintain quality. They also estimate the time and cost to complete projects.

Engineers use computers extensively to produce and analyse designs; to simulate and test how a machine, a structure, a circuit or a system operates.

Why do Engineering?

Choose a career in Engineering and you can be part of making great things happen.

Engineering offers you:

- Intellectual and technical challenges
- Chance to apply your creativity every day
- Variety of well paid careers with opportunities for rapid advancement
- Possibility to contribute to society and protect the environment
- Travel and work abroad

What makes a good engineer?

The skills that make a good engineer include:

Analytical

you will analyse how things work and think of ways to make them work better.

Communication

you will need to be able to communicate effectively using both oral and written methods.

Logical Thinking

you will have to make sense of complex systems and how problems arise.

Mathematical

often you will apply mathematical, scientific knowledge to devise solutions to technical problems.

Problem Solving

you will devise solutions to everyday problems.

Team building

you will normally work as part of a multi-disciplinary team to enable a project to be completed.

Leadership

you will be expected to take responsibility for a project and the people working on the project.

Business

you will need to apply business and management techniques to ensure a project is completed on time and within budget.

Technical Knowledge

you must have specialist knowledge in your chosen field.



Dr Fergal Tuffy

I completed the HND in Electrical & Electronic Engineering in June 2000.

I then went to University of Ulster at Magee and completed a BEng Honours in Electronics & Computing in June 2003. Staying at Magee I completed a PhD in Computing and Intelligent Systems within the Intelligent Systems Research Centre.

After a spell with Intel Ireland's Health Research and Innovation Dept working on product design and development I joined the South West College as Project Manager for an Interreg funded project called Beyond Computing, where my specialism was rapid prototyping and product development. In January 2009 I joined the new South West College InnoTech Centre as a Research Lecturer heading up the Design Strand. I am also course co-ordinator and lecturer for a Foundation Degree in Industrial Electronic Engineering.





What are BTEC courses?

The names of the qualifications we offer might be new to you, but they are recognised by industry and universities, as programmes that will provide the skills and knowledge they want their future employees or students to have.

What are BTEC courses equivalent to?

Level 2 Certificate

You will study engineering subjects and gain a qualification worth 2 GCSEs.

Level 2 Diploma

You will study a range of engineering topics and gain a qualification worth 4 GCSEs, as well as practical skills, to allow you to move onto a Level 3 Diploma course.

Level 3 Subsidiary Diploma

You will gain a qualification related to your chosen branch of engineering. It is equal to an A level. The practical work, experience and skills will prepare you for work or higher level study. It can be used in combination with 2 A levels for university entrance.

Level 3 Diploma

You will gain a qualification related to your chosen branch of engineering. It is equal to 2 A levels. The practical work, experience and skills will prepare you for work or higher level study.

Level 3 Extended Diploma

You will gain a qualification related to your chosen career, equal to 3 A levels. The practical work, experience and skills will prepare you for work or higher level study. It is a popular alternative to taking 3 separate A levels.

Level 4 Higher National Certificate

In this higher education course, you will combine practical skills, work experience and academic study to gain a vocational qualification that leads to work or university.

Level 5 Higher National Diploma

In this higher education course, you will combine practical skills, work experience and academic study to gain a vocational qualification that leads to work or 2nd/3rd year at university.

Careers in Engineering

Whether you want to specialise in electronics, communications, manufacture or maintenance, there is a wide range of engineering opportunities available to you in the UK and abroad.

Careers in engineering are popular due to the prestige, positive job outlook, and higher than average salary associated with this field. If you're innovative and like a challenge, then engineering may just be the right career field for you. And when it comes to engineering, there are enough specialties to choose from that you are sure to find one to suit you.

Below is a list of some of the fields that you, as a qualified engineer, could find yourself working in:

- **Research**
- **Design**
- **Manufacture**
- **Materials**
- **Energy conversion**
- **Broadcasting**
- **Electronics**
- **Contracting and Building Services**
- **Education and Training**
- **Energy and Power**
- **Environmental Engineering**
- **Measurement, Control and Automation**
- **Medical Engineering**
- **Process Engineering**
- **Telecommunications and Information Engineering**
- **Mechanical Engineering**
- **Consultancy**



Robert Patton

*Completed HND in Mech/
Manufacturing Engineering*

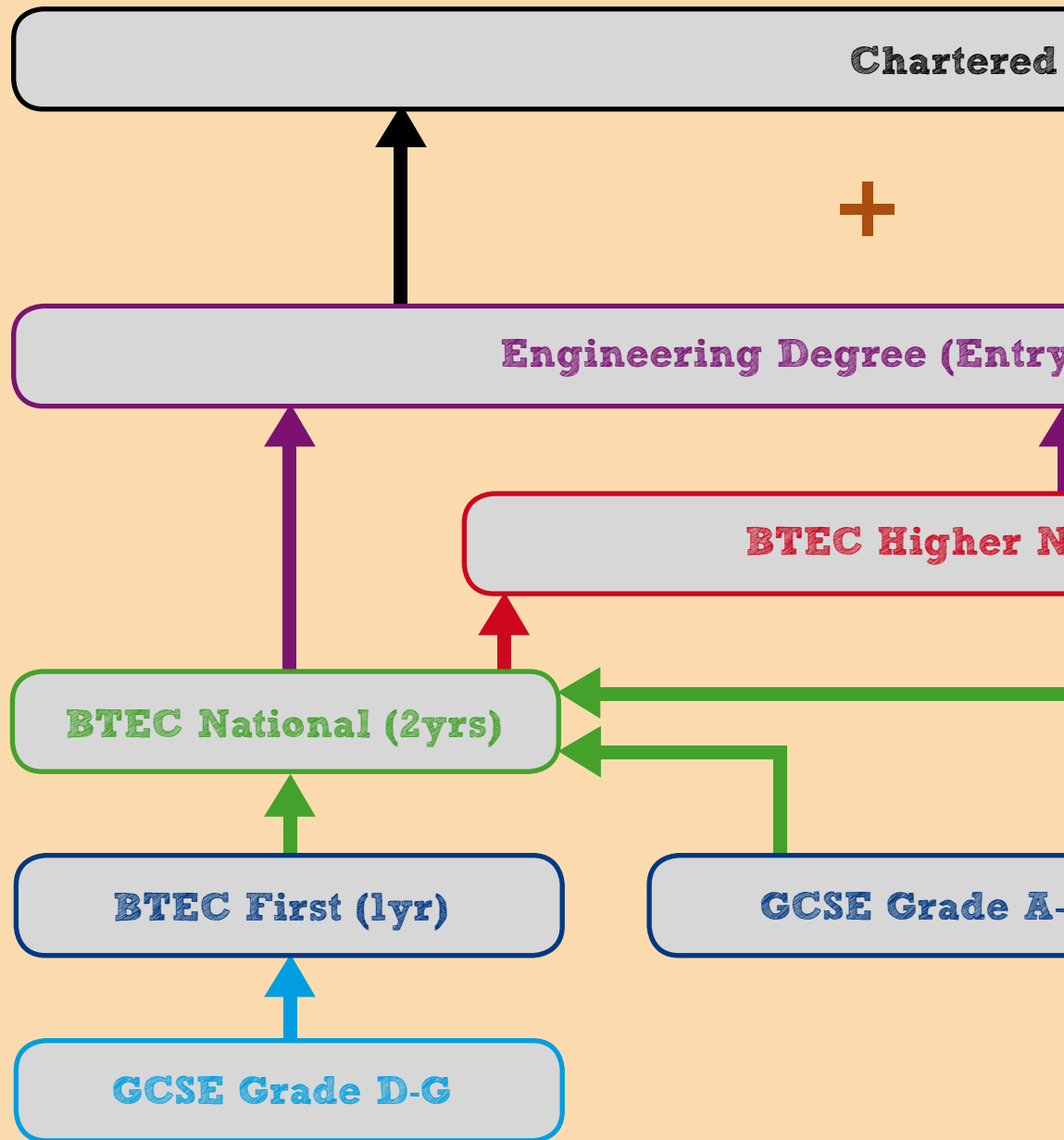
*Started as R & D Engineer, FG
Wilson Engineering, Larne*

*Progressed to CAD Systems
Support, FG Wilson Engineering,
Larne*

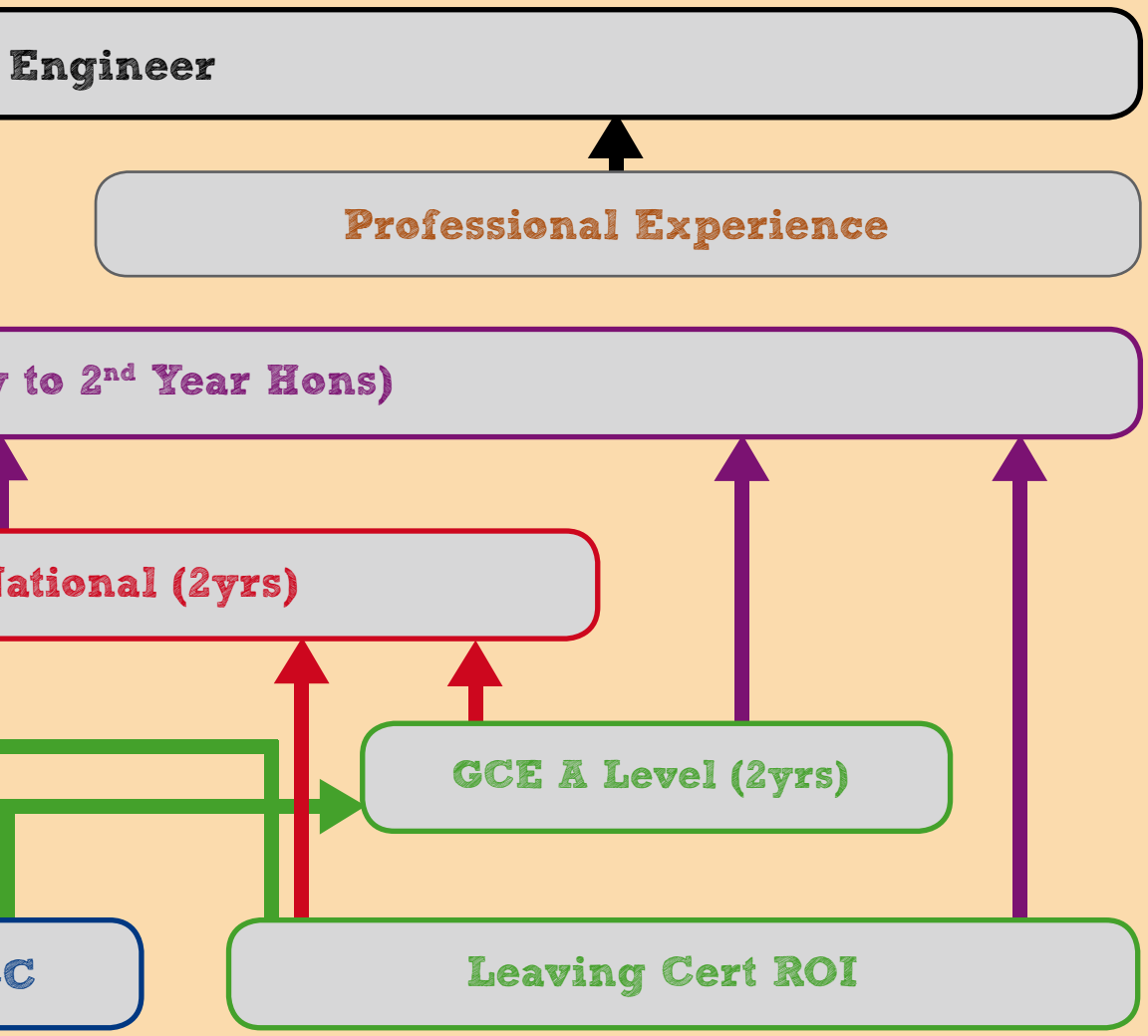
*Currently CAD Systems Manager
with SDC Trailers, Toome*



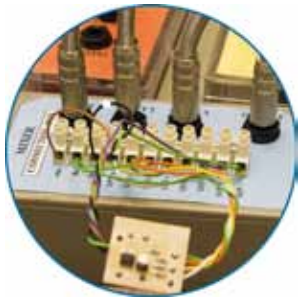
Pathways to an Engineering Career



Pathways to an Engineering Career



Engineering Courses at North West Regional College



BTEC Level 2 Extended Certificate in Engineering

This course will give you a broad introduction to engineering and will allow you to experience specialist areas such as electronics or manufacturing. It offers you the chance to make informed choices about your future career by giving you an insight into the engineering industry. Presently it is run as an after school course two afternoons a week for one year.

For more details contact:

Mr Colin Johnston 028 7127 6038



BTEC Level 2 Diploma in Engineering

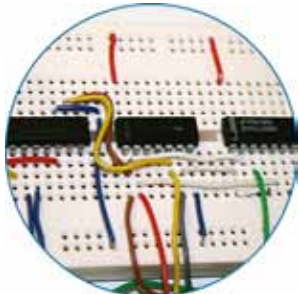
This course will be of interest to you if you are considering a career in the engineering industry and would like to improve your qualifications. You will be introduced to the use of the engineering principles required by different industries which will help you decide on which career path in engineering will suit you best. This is a one year full time course.

Successful completion will enable you to progress onto a BTEC Level 3 course in Engineering, Construction or the Electrical / Mechanical Modern Apprenticeship.

For more details contact:

Mr Liam Tully (Londonderry) 028 7127 6350

Mr Gino Tierney (Limavady) 028 7127 8708



BTEC First Certificate in Engineering (Electronics) students receiving their certificates

BTEC Level 3 Subsidiary Diploma in Engineering

The BTEC Level 3 Subsidiary Diploma in Engineering will give you an understanding of the practical skills and knowledge needed to begin professional work in the engineering industry or move on to further study.

You will discover what career opportunities are available, helping you to choose your preferred area of work. The BTEC Level 3 Subsidiary Diploma is equivalent to one A Level.

For more details contact:

Mr Gino Tierney 028 7127 8708

BTEC Level 3 Extended Diploma in Engineering

This course can provide preparation for a range of technical and management careers in engineering, and includes specialised studies which are directly relevant to professions in which you may intend to seek employment. Choose a career in Engineering and you can be part of making great things happen. This qualification, equal to 3 A Levels, will enable you to gain a well-paid, prestigious career, equipped with skills recognised around the world. It is a two year full-time course.

For more details contact:

Mr Garry Mallett (Londonderry) 028 7127 6342

Mr John Pollock (Limavady) 028 7127 8773

BTEC Level 5 Higher National Diploma in Engineering

This course aims to prepare you for:

- specialised studies which are directly relevant to the engineering profession in which you will be seeking employment.
- progression to graduate and postgraduate studies.
- a range of technical and management careers in engineering.

It is a two year full-time course with the possibility of choosing an electrical /electronic, mechanical/manufacturing or a general engineering pathway in the second year.

For more details contact:

Contact: Mr Paul Young 028 7127 6338



Prizes, Awards and Bursaries

Engineering students can compete for a number of prizes that are awarded by the School of Construction, Engineering and Science.

BIC Systems Trophy for the best Higher National Electronics final year project.



Majid Zine, BIC Systems winner with his project on creating a ph measuring system using virtual instrumentation.



Bryce Glenn and Brian Callan Joint winners of the DuPont Award.

DuPont Award for the best results in Higher National Mechanical Engineering.

Thomas Williams Trophy for the best Higher National Electrical Engineering student.

Darren Murphy Trophy for the best first year Higher National Electrical Engineering student.

Nuffield Science Bursaries are for students in their first year of an advanced or higher-level STEM course. The scheme gives them the opportunity to join a real research project with practising scientists in any STEM area. Projects run for four to six weeks in the summer vacation and students receive a £80 a week bursary. Dale Holmes, a first year National Diploma students will benefit from this by doing a 4 weeks placement with Fleming Agri Products in Newbuildings

In addition a number of our students have been awarded the Navcomm award. Presented by the U.S. Navcommsta Londonderry Alumni Association and consisting of a medal and a scholarship for students on a full time engineering course who have shown good progress and potential to undertake higher study.

Engineering Students Receive US Scholarships

- US NAVY ALUMNI SCHOLARSHIP FOR COLLEGE ENGINEERING STUDENTS



Alan Grant



David Gillespie



Eunan O'Neill



Paul Black

How to get on course...

Know the course you wish to do?



**Complete an
Application Form
& return to the
Admissions Office**

**Need more advice & guidance on
the options available?**

**Make an
appointment with
our Careers Staff who
will help you to decide
your best options:
028 7127 6080/8706**





north west regional college



**SCHOOL OF
CONSTRUCTION
ENGINEERING
& SCIENCE**

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Head of School
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**Mrs S McGowan
Head of School Support
028 7127 6014**

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