

Excellence in Manufacturing Engineering



About Us

The Northern Regional College is a recognised Centre of Excellence in Manufacturing Engineering. Since its establishment in 2000, the award winning centre based at Ballymena Campus has developed its expertise and resources in the area of manufacturing engineering and the range of services offered to industry.

Northern Ireland Industry now has access to a Centre with modern engineering resources and expertise to support their business development.

Knowledge transfer is offered in the areas of computer aided design, (CAD), computer numerical control, (CNC), CAD/CAM, coordinate measurement, (CMM), robotics, rapid prototyping, pneumatics & electro-pneumatics, hydraulics, programmable logic controllers, (PLC) and electrical and mechanical maintenance programmes.



All the Centre services can be tailored to create bespoke training solutions to meet the specific needs of industry. Recently an R&D section has been established within the College to economically engage with local industry in helping to develop R&D solutions for specific manufacturing problems, both in larger companies and SME's.

Services to business:

The Northern Regional College offers businesses the following types of support:

- Research and Development in the areas of expertise indicated.
- Bespoke training programmes in the areas of expertise indicated.
- Comprehensive range of part-time and full-time engineering courses.
- Lecturer company placement to aid in development of in-house programmes.
- Access to modern Precision Engineering resources.
- Access to modern Robotic equipment.
- Access to modern Mechatronics equipment.
- Access to modern fabrication technologies.

Industrial Bespoke Training Course Provision

The School of Engineering & Science at the Northern Regional College offers a range of training solutions that can be tailored to meet the specific needs of industry.

If you cannot find a course listed to meet your requirements, please do not hesitate to contact the Industrial Contracts, FE/HE or R&D management staff, (see contact information on last page) as we may still be able to help.



bringing
EDUCATION &
INDUSTRY
together

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Industrial Training Programmes - Overview

Abrasive Wheel Course

The abrasive wheel regulations were repealed in 1997 in favour of the 'Provision and Use of Work Equipment Regulations'. This new regulation still requires people who work with, and use any form of fixed or portable grinding machine to be appointed and trained for the job.

Course Duration: One day course.

AutoCAD

AutoCAD is an industrial standard Computer Aided Drafting and Design software for those working in Mechanical and Electrical Engineering.

Course Duration: Bespoke programmes normally over 3 to 4 days.

Co-ordinate Measurement & Inspection (CMM)

Training in measurement & inspection techniques are offered at the College using a 'Brown & Sharpe' Mistral, Co-ordinate Measurement Machine and the latest PC-DMIS software.

Course Duration: Delivered over 2 to 3 days dependant upon specific requirements.



CNC Training Programmes - Turning & Milling (Fanuc, Heidenhain & Siemens 840D Controls)

A range of CNC programmes are available in Turning & Milling. The content and modes of delivery for these programmes can be tailor-made to the industry needs. NVQ units can also be included, which provide an additional qualification to the trainee. Previous programmes have also attracted some funding from the Engineering Training Council in support of up-skilling the workforce. Detailed information and resource information is available upon request.

Course Duration: Dependant upon specific requirements.

Conventional Workshop Training

Industrial courses can be offered in the areas of: Bench Fitting, Turning, Milling, and Grinding.

Course Duration: Dependant upon specific requirements.

Electrical to Mechanical Up-Skilling

This course is designed for electrical technicians who wish to gain competency in mechanical maintenance principles. The course format is very much 'Hands-On' with the emphasis being on the development of sound practical skills within the context of safe working practices. Detailed course content available upon request.

Course Duration: 2 days per week for 7 weeks.

Electro Pneumatics

This course is designed for maintenance technicians who require competency in pneumatics and electro-pneumatic principles. The course format is very much 'Hands-On' with the emphasis being on the development of sound practical skills within the context of safe working practices. Detailed course content available upon request.

Course Duration: 4 days.

SolidWorks

This programme aims to teach how SolidWorks is used to design mechanical parts and assemblies. Course content includes: geometry creation, part features, assemblies, and engineering drawings, etc.

Course Duration: 3 to 5 days depending on specific requirements.



Hydraulics

This course is designed for maintenance technicians who require competency in hydraulic principles. The course format is very much 'Hands-On' with the emphasis being on the development of sound practical skills within the context of safe working practices. Detailed course content available upon request.

Course Duration: 3 or 4 days dependant upon previous knowledge.

CNC Laser and Pressbrake

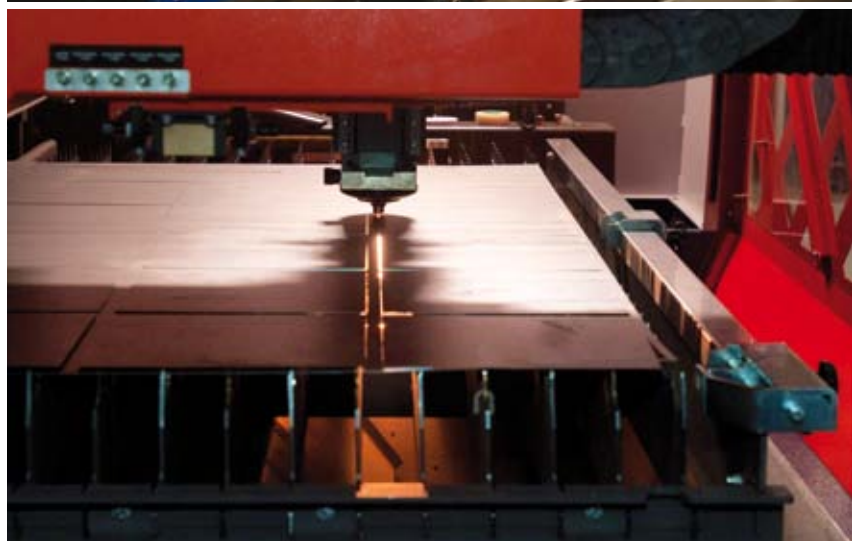
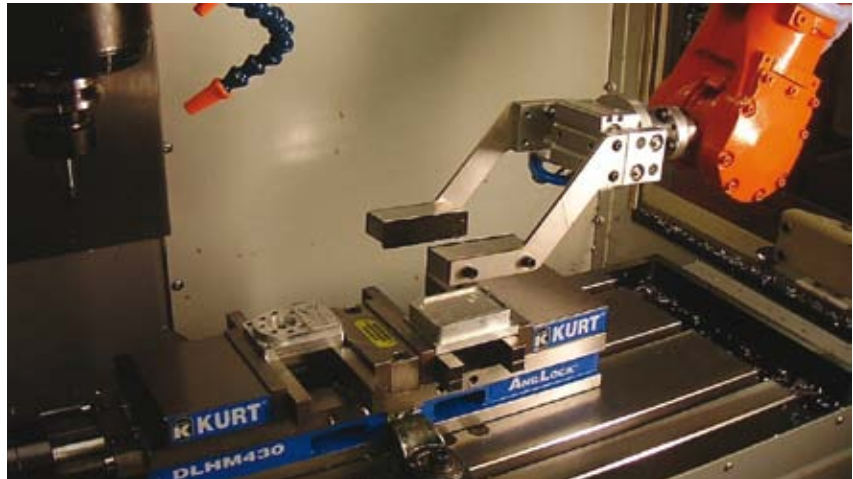
Training on operation of Bystronic Laser Cutting Technology and Pressbrake Technology can be customised to specific requirements. These programmes can be delivered in house or at the company premises if suitable.

Course Duration: 1, 2 or 3 days, dependant upon requirements.

Programmable Logic Controllers

With Mechatronic training becoming the norm, it is vital that personnel from both electrical and mechanical backgrounds have some training in programming and fault finding. The Industrial Control Lab has a fully equipped suite of networked Allen-Bradley and Siemens Step 7 fixed and modular controllers with associated computer facilities for programming and testing. The suite also contains a number of industrial simulation models on which fault-finding can be carried out.

Course Duration: Normally a 5 day training programme.



Mechanical to Electrical Up-Skilling

This course is designed for mechanical technicians who wish to gain competency in electrical maintenance principles. The course format is very much 'Hands-On' with the emphasis being on the development of sound practical skills within the context of safe working practices. Detailed course content available upon request.

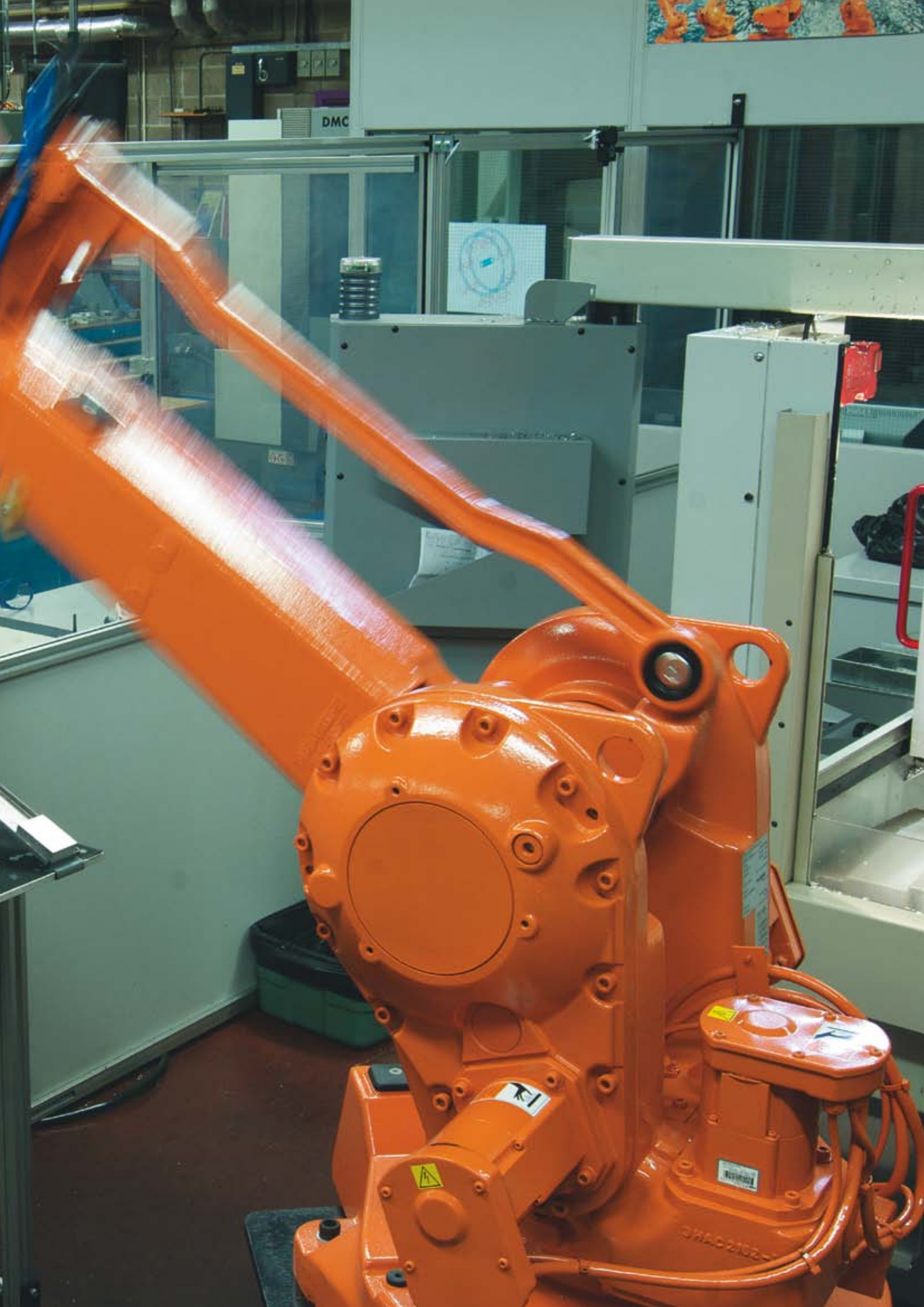
Course Duration: 2 days per week for 7 weeks.

Robotics

Robotics training courses using ABB integrated robots and IGM Welding Robotic Cells can be customised to specific requirements. These programmes can be delivered in house or at the company premises if suitable.

Course Duration: 1, 2 or 3 days, dependant upon requirements.







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FE & HE Programmes

National Certificate / Extended Diploma in Manufacturing or Electrical / Electronic Engineering

To provide a programme of academic study and practical training which leads to employment as a technician in the engineering industry or entry to Higher National Diplomas/Certificates in Engineering or a wide range of Engineering Degree courses at University. Students have the opportunity to specialise in the area they wish to study. At the end of the first year of the Diploma Courses you can choose either Electrical/Electronic or Manufacturing specialisms.

Entry Requirements

- 4 GCSEs Grade C.
- BTEC First Diploma (in relevant area).
- NVQ Level 2 (in relevant area).

Standard entry requirements offered by each applicant should reflect their interest and ability in this subject area, e.g. GCSE Mathematics and Physics/Science.



Higher National Certificate/Diploma in Manufacturing or Electrical / Electronic Engineering

To provide the engineering industry with higher level technicians who possess the necessary technical, managerial, analytical and personal skills to operate effectively as team members.

Entry Requirements

A total of at least 120 UCAS tariff points (including a pass grade in at least one technical subject, such as Mathematics/Physics/Chemistry, at Advanced or AS.



Training Programmes

Sponsored Apprenticeship Scheme

To meet the needs of the local manufacturing industry and match qualifications to an engineering trainee, the sponsored technician apprenticeship programme offers industry the opportunity to get newly recruited apprentices trained to a high level. Trainees are employed and as such are paid by their employer.

Total Training duration is 260 weeks, of which 36 weeks is full-time in college. The remaining training time is one day a week in college and four days with the employer.

During the first 36 week (year 1) period the trainee will undertake:

- NVQ level 2 in Performing Engineering Operations.
- Year 1 of a National Certificate in Engineering or Year 1 of City and Guilds 2800 as underpinning knowledge.
- Essential skills.

The remainder the training time (3 years) is given to complete:

- National Certificate in Engineering or City & Guilds 2800 Level 3 Certificate.
- NVQ level 3.

Entry Requirements

These courses are for young people aged over 16 years, and who wish to take up training under the Training For Success Programme.

A Training For Success Training Credit is required for these programmes and these are issued from the local job centre.

A satisfactory secondary school profile is needed. Applicants may in some cases be required to sit an aptitude test. Entry requirements to the sponsored programme are normally four Grade C's or above including Maths and a science subject.

* Contact the NRC Training Manager for further details.



Vocational Programmes

AutoCAD

AutoCAD is the industry standard Computer Aided Drafting and Design software for those working in Mechanical and Electrical Engineering. City & Guilds have compiled the 4353 series of competence-based courses for those wishing to gain expertise in the use of AutoCAD.

Course Duration: Evening class over 34 weeks.

CNC Machining (Turning & Milling) Fast Track Option or Accredited C&G 2303 Part II Part Programming

This programme has been developed for those people wishing to acquire a sound understanding of CNC machining and programming techniques using both Fanuc and Heidenhain controls.

Course Duration: Evening class over 34 weeks.

Conventional Workshop Training

This programme is designed to allow either new or experienced machine tool operators to have a practical session updating their skills. Practical exercises in all aspects of Bench Fitting, Turning, Milling, and Grinding are covered.

Course Duration: Evening class over 15 weeks.

Motor Vehicle / Motor Cycle

This programme is designed to allow either new or experienced motor vehicle technicians to have practical sessions updating their skills. Practical exercises in all aspects of motor vehicle/cycle repair and maintenance and are covered.

Course Duration: Evening class over 12 weeks.

Programmable Logic Controllers

Introduction to Programmable Logic Controllers is for those who have some experience with electrical/mechanical control systems, but now need to know the basics of PLC programming and control.

Course Duration:

- Introductory Course - 30 hours (12 evening sessions 2.5 hrs per evening).
- Advanced Courses - 30 hours (12 evening sessions 2.5 hrs per evening).

SolidWorks

This programme aims to enable candidates to design in SolidWorks with the application of 'Design-Intent', create standard modelling features using a range of options, apply geometric relationships to model elements, understand and apply the fundamentals of assembly modelling.

Course Duration: Evening class over 33 weeks.

A City and Guilds 4353 in Parametric Modelling at level 2 and level 3 can be offered for those wishing to gain expertise in the use of SolidWorks.



Welding

Welding programmes on offer at the Northern Regional College consist of seven modules. The programmes are offered as bundled packages consisting of Module One as standard and any other combination of welding modules. Each programme instructs the trainee in the underpinning knowledge and practical skills associated with a specific type of Welding.

Types of welding courses offered include: Oxy-Acetylene Welding & Cutting, Brazing, Silver Soldering, MMA, MIG and TIG.

Course Duration: Dependant upon selection of modules. Details available on request.

| | | | |
|--------------------------|--|------------------|------------------|
| <input type="checkbox"/> | NRC – Antrim: Fountain Street, Antrim, Co Antrim, BT41 4AL | T: 028 9446 3916 | F: 028 9446 5132 |
| <input type="checkbox"/> | NRC – Ballymena: Farm Lodge Buildings, Ballymena, Co Antrim, BT43 7DF | T: 028 2565 2871 | F: 028 2563 1353 |
| <input type="checkbox"/> | NRC – Ballymena: Trostan Avenue Building, Ballymena, Co Antrim, BT43 7BN | T: 028 2563 6221 | F: 028 2565 9245 |
| <input type="checkbox"/> | NRC – Ballymoney: 2 Coleraine Road, Ballymoney, Co Antrim, BT53 6BP | T: 028 2766 0401 | F: 028 2766 4529 |
| <input type="checkbox"/> | NRC – Coleraine: Union Street, Coleraine, Co Londonderry, BT52 1QA | T: 028 7035 4717 | F: 028 7035 6377 |
| <input type="checkbox"/> | NRC – Larne: 32-34 Pound Street, Larne, Co Antrim, BT40 1SQ | T: 028 2827 8855 | F: 028 2827 3289 |
| <input type="checkbox"/> | NRC – Magherafelt: 22 Moneymore Road, Magherafelt, Co Londonderry, BT45 6AE | T: 028 7963 2462 | F: 028 7963 3501 |
| <input type="checkbox"/> | NRC – Newtownabbey: 400 Shore Road, Newtownabbey, Co Antrim, BT37 9RS | T: 028 9085 5000 | F: 028 9086 2076 |

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