

## Central College Nottingham Course Specification

<b>Basic Course Information</b>		
1.	Awarding Body:	Pearson
2.	School/Campus:	Highfields
3.	Final Award, Course Title and Modes of Study:	Higher National Diploma/Certificate in Manufacturing Engineering
4.	Normal Duration:	2 years
5.	UCAS Code:	006H

<b>Overview and general educational aims of the course</b>
<p>This programme is designed to educate future engineers with greater flexibility and technical capability by exploring the integrated nature of Engineering, covering the traditional disciplines of Manufacturing.</p> <p>The programme is ideal for students who have completed studies at an advanced level, or who have more varied experience and want to pursue a career in Engineering and Manufacturing companies.</p> <p>The course contains significant project-based learning including laboratory investigations, design work, projects, case studies and tutorials.</p>
<p><b>Course outcomes</b> Course outcomes describe what you should know and be able to do by the end of your course if you take advantage of the opportunities for learning that we provide.</p>
<p><b>Knowledge and understanding</b> By the end of the course you should be able to:</p> <ul style="list-style-type: none"><li>○ Develop underpinning skills in manufacturing engineering</li><li>○ Provide a platform for students to access their imagination and develop solutions to manufacturing problems within the engineering environment.</li><li>○ Establish key transferable and employability skills and develop a multi tasking and multi skills approach to professional practices.</li></ul>
<p><b>Skills, qualities and attributes</b> By the end of the course you should be able to:</p> <ul style="list-style-type: none"><li>▪ <b>Develop Knowledge of Manufacturing Engineering and Systems by</b><ul style="list-style-type: none"><li>○ Understanding of the general engineering industry and related work placements</li><li>○ Historical, theoretical and ethical positions in response to engineering design</li><li>○ Understand the relationship between traditional skills and developing technologies</li><li>○ Understand the creative process of engineering design</li></ul></li><li>▪ <b>Utilise thinking skills relevant to the manufacturing engineering sector such as</b><ul style="list-style-type: none"><li>○ Self-reliance and self-evaluation</li><li>○ Self-reflection / analysis and critical awareness</li><li>○ Creative thinking and convention</li></ul></li></ul>

- Research skills
- **Establish Practical skills essential for the Manufacturing Engineer such as**
  - Production methods
  - Technical aptitude
  - Pre planning and production organisation
  - Presentational skills
- **Practice Skills for life and work (general skills), for example**
  - Time management - participation and working to deadlines
  - Working within groups and independently
  - Work experience
  - Interpersonal skills – engineering principles and processes

### **Teaching and learning methods**

Your programme will be delivered in workshops and classrooms as well as design suites and labs.  
You will also be working in our new Engineer4ing centre at Highfields which opened in September 2014.

### **Assessment methods**

The programme will cover a range of units that will be made up from the Mandatory Core Units. The standard of your work will be assessed through practical and written assignments.

Each project and assignment will have clear learning outcomes and guidance on what you need to do to be successful. The achievement of learning outcomes will contribute to your success in one or more units of study. Once all learning outcomes have been completed your achievement will be graded.

### **Course structure and curriculum**

HNC Mandatory Core Units

Analytical Methods for Engineers  
Engineering Science  
Project Design Implementation and Evaluation

HNC Specialist Units

Further Mathematics (L3)  
Mechanical Principles  
Manufacturing Process  
Application of Machine Tools  
Manufacturing Planning and Scheduling Principles  
Computer Aided Machining  
CAD & Manufacturing

HND Core Units:

Analytical Methods for Engineers  
Engineering Science  
Mechanical Principles  
Project Design Implementation and Evaluation

#### HND Specialist Units:

Further Mathematics (L3)  
Manufacturing Process  
Application of Machine Tools  
Manufacturing Planning and Scheduling Principles  
Computer Aided Machining  
Engineering Design  
Quality & Business Improvement  
Health and Safety and Risk Assessment  
Personal and Professional Development  
Mechatronics Systems  
CAD & Manufacturing  
Advanced Manufacturing Technology

#### **Admission to the course**

Applicants should have successfully completed a minimum of 4 GCSEs (or equivalent) at grade C or above including English and Maths. Applicants must also have completed one of the following level 3 qualifications equivalent to 80 UCAS points:

A levels in one or more relevant subjects

BTEC Diploma

Access Certificate

Other level 3 qualification in a relevant subject

Mature applicants with relevant experience will be considered subject to interview. All applicants will be considered on interview and must have a minimum of 80% attendance on their current course.

#### **Support for learning**

Support is available through regular contact from a variety of Tutors who are experts in their respective fields and experienced engineers in their own right. The Course Leader will also support the learners to ascertain relevant learning objectives and monitor progress.

#### **Graduate destinations/employability**

Learners may progress onto the Manufacturing Engineering HND top up and then onto an appropriate degree programme. They may also progress into employment in a broad range of industries with either a managerial or technical bias in research and development, design, technical sales or production.

#### **Course standards and quality**

All courses conform to College and Pearson requirements and a comprehensive review of Course Standards and Quality is undertaken periodically.

We would like you to contribute to the continuing development of this course and we

welcome feedback from students in a number of ways including via the Blogspot on your course information page and course forum meetings. You also have an opportunity to put yourself forward to be considered as a course representative at the beginning of each of your years of study.

As part of this role you will be invited to attend the course committee meetings that occur three times a year as well as the College HE Forum which is attended by all Course Representatives.

**Assessment regulations**

This course is subject to the College's Assessment Regulations for HNs (located in Section D of the Quality Handbook).

**Additional Information**

Date this course specification approved: September 2014

Any additional information:

Further information about this programme is available from:

<http://www.centralnottingham.ac.uk>