

Programme Specification

1. Awarding Institution Edexcel (Pearsons)	2. Teaching Institution North Kent College	3. Faculty/Department Department of Engineering	4. UCAS Code: N/A
5. Final Award Higher National Certificate		6. Programme Title Higher National Certificate General Engineering	7. Accredited by: Edexcel (Pearsons)
8. Quality Assurance Agency (QAA) Benchmarking Group(s) Engineering			
9. Entry Requirements			
<p>Students Under 21</p> <p>Level 3 BTEC Diploma in Engineering Level 3 BTEC Extended Diploma in Engineering</p> <p>GCSE Grade C or 5 or above in Science and GCSE maths and English Grade 5 and above.</p> <p>Students over 21: If you do not have the above UCAS or GCSE requirements but have appropriate experience, specific knowledge or industry based qualifications, your application will be welcomed and still considered. All students must bring a reference from the employer to interview.</p>			
10. Educational Aims of the Programme and Potential Career Destinations of Graduates [Maximum 150 words]:			
<p>The main aims and learning objectives of this programme are to:</p> <ul style="list-style-type: none"> Develop a range of skills and techniques, personal qualities and attributes essential for successful performance in working life and thereby enable them to make an immediate contribution to employment at the appropriate professional level. Provide preparation for a range of technical and management careers in mechanical/manufacturing electronic and electrical engineering. 			

- Equip individuals with knowledge, understanding and skills for success in employment in the mechanical/manufacturing, electronic and electrical engineering-based industry.
- To contribute to the regional, national and international economy by providing heavy current based units as part of the specialist unit offer on this program.
- To enable students to develop skills in communication, team working, problem solving, application of number, use of engineering technology packages in addition to improving their own learning and work performance.
- To enable students to develop key areas of knowledge and expertise necessary both for employment in the engineering industries worldwide and for life-long learning.

11. Summary of Skills Development for Students within the Programme [Maximum 150 words]:

- Communication and interpersonal skills
- Knowledge mobilisation and knowledge translation
- Critical and creative thinking
- Personal effectiveness
- Integrity and ethical conduct
- Research management

12. The programme provides opportunities for you to achieve the following outcomes:	The following teaching, learning and assessment methods are used to enable you to achieve and demonstrate these outcomes:
A. Knowledge and understanding of: —————▶	A. Teaching and learning methods:
Prescribed within the indicative content for each individual course (module). The knowledge gained from specific modules is subject to module mix offered on the programme (module mix subject to needs of students participating on programme).	A combination of lectures, tutorials, practical workshops, are delivered appropriate to the outcomes specified in the taught course specifications.
	A. Assessment methods: A combination of assignment based coursework, practical assessments together with closed book and controlled assessments are used for each course. The nature of the assessment is appropriate to the subject area and learning outcomes outlined in each course specification.

B. Intellectual skills: —————▶	B. Teaching and learning methods:
<ol style="list-style-type: none"> 1. Apply knowledge to the solution of familiar and unfamiliar situations 2. Develop reasoned argument and challenge assumptions 3. Take responsibility for personal learning and continuing professional development 	A range of T&L methods are implemented on the programme tailored to the individual needs of the student group. Students will be exposed to different learning situations such as personal assessment and case study approaches to develop their reflective practice.
	B. Assessment methods: A variety of assessment methods are used that include practical assessments together with closed book and controlled assessments used for each course. The nature of the assessment is appropriate to the subject area and learning outcomes outlined in each course specification.

C. Subject practical skills: —————→	C. Teaching and learning methods:
<ol style="list-style-type: none"> 1. Ability to critically evaluate and interpret laboratory practical measurements, in terms of their significance and underlying theory. 2. To develop hypotheses, and analyse scientific data using a variety of methods. 3. Apply a range of general and occupational specific skills within the working environment. 	<p>Subject-specific practical skills are developed through a range of activities led by tutors and students within the engineering laboratory. Industry related skills are also to be demonstrated using a variety of test equipment.</p>
	C. Assessment methods:
	<p>A variety of assessment methods are used to assess the practical skills. These include observations of practical skills and reflective analysis within specific assessments.</p>

D. Transferable/key skills: —————→	D. Teaching and learning methods:
<ol style="list-style-type: none"> 1. Communication and presentation skills. 2. Independent study skills. 3. Team work and interpersonal skills. 4. Competency in numeracy, IT skills and problem solving skills. 5. Developing the skills necessary for self-managed and lifelong learning (e.g. working independently, time management and organisation skills). 6. Identifying and working towards targets for personal, academic and career development. 7. Developing an adaptable, flexible, and effective approach to study and work. 	<p>Computing, IT skills, problem-solving, teamwork, reflective practice, presentation and communication skills are developed in a contextualised manner throughout the programme. These skills are enhanced in practical sessions, tutorials, workshops and coursework assignments. Student-centred computer and information retrieval exercises are incorporated at all levels.</p>
	D. Assessment methods:
	<p>A variety of assessments are used to assess transferable skills. These include performance analysis, individual oral presentations, meeting assignment deadlines, problem based coursework and through portfolios consisting of reflective, evidence based competence.</p>

13. Programme Structure: Levels, Courses and Credits →	<i>Awards, Credits and Progression of Learning Outcomes</i>
<p>Requirement of 3 compulsory courses, plus additional courses to total 120-155 credits in total, decided by North Kent College subject to needs of students participating on programme.</p> <p>Compulsory Courses</p> <p>Analytical Methods for Engineers (15 credits) (level 4)</p> <p>Engineering Science (15 credits) (level 4)</p> <p>Project Design, Implementation and Evaluation (20 credits) (level 5)</p> <p>Optional Courses (decided by North Kent College subject to needs of students participating on programme)</p> <p>Programmable Logic Controllers (15 credits) (level 4)</p> <p>Management of Projects (15 credits) (level 4)</p> <p>Mechatronic Systems (15 credits) (level 4)</p> <p>Applications of Power Electronics (15 credits) (level 4)</p> <p>Combinational and Sequential Logic (15 credits)(level 4)</p> <p>Electrical and Electronic Principles (15 credits) (level 5)</p> <p>Further Analytical Methods for Engineers (15 credits) (level 5)</p> <p>+ other optional units listed within the awarding bodies specification could be used by request from either the sponsoring employer and/or students attending the programme.</p>	<p>HNC General Engineering</p>