

HND Computing & Systems Development

Programme Specification

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Awarding Body: Edexcel (BTEC)
Teaching Institution: South and City College Birmingham
Final Award: Edexcel BTEC Level 5 Higher National Diploma in Computing and Systems Development
Programme Title: HND Computing and Systems Development
Mode of Study: Full time
Language of Study: English
UCAS Code: S20 004G

Aims of the Programme

The HND Computing and Systems Development qualification has been developed by Edexcel. Edexcel state the aims of the programme are to focus on:

- providing education and training for a range of careers in computing and systems development
- providing opportunities for facilities managers to achieve a nationally recognised Level 4/5 vocationally specific qualification
- developing the knowledge, understanding and skills of learners in the field of computing and systems development
- providing opportunities for learners to focus on the development of higher-level skills in a computing and systems development context
- providing opportunities for learners to develop a range of skills and techniques and attributes essential for successful performance in working life.

This qualification aims to meet the needs of the above rationale by:

- equipping learners with knowledge, understanding and skills for success in employment in the computer industry
- enabling progression to an undergraduate degree or further professional qualification in computing or a related area
- providing opportunities for specialised study relevant to individual vocations and contexts
- supporting individuals employed or entering employment in the computing industry
- developing the learner's ability in the computing industry through effective use and combination of the knowledge and skills gained in different parts of the programme
- developing a range of skills and techniques, personal qualities and attributes essential for successful performance in working life and thereby enabling earners to make an immediate contribution to employment
- providing flexibility, knowledge, skills and motivation as a basis for future studies and career development in computing and systems development.

Relationship to Subject Benchmark Statements and other Relevant External Reference points

Edexcel BTEC Higher Nationals in Computing and Systems Development are designed to relate to the National Occupational Standards in the IT and Telecoms Professionals sector at level 4 and 5, which in turn form the basis of the IT National Vocational Qualifications (NVQs).

Higher level skills and abilities

Edexcel Learners will be expected to develop the following skills during the programme of study:

- ability to integrate a range of concepts, knowledge and skills relating to computing and systems development
- ability to apply complex theories to practical realistic work situations in the computing sector
- independence of approach to study and the generation of computing evidence
- ability to engage with complex and/or unpredictable situations in computing contexts
- ability to take responsibility to manage and direct their own and others' activities
- insight and judgement in relation to the margins and consequences of error
- research and investigative skills
- responsiveness to change and ability to multi-task

- ability to innovate and work in a creative way.

Programme Structure

To achieve the qualification of HND Computing and Systems Development, learners will study 16 modules. This is subject to module combination rules and requirements as stipulated by Edexcel. Learners must pass all 16 modules (240 credits) to achieve the award.

The programme is provided over two years on a full time basis, typically this is from September until June and will require attendance at College for 2½ days per week. Modules are designated as Level 4 or Level 5, to achieve the HND learners must achieve at least 125 credits at Level 5.

Learners must achieve a minimum of 120 credits (of which 65 must be at level 4) on their programme of learning to be awarded an Edexcel BTEC Level 4 HNC and a minimum of 240 credits (of which at least 125 must be at level 5) to be awarded an Edexcel BTEC Level 5 HND.

Mandatory core units – all four units must be taken		Unit level	Unit credit
1	Business Skills for e-Commerce	4	15
2	Computer Systems	4	15
3	Employability and Professional Development	4	15
4	Project Design Implementation and Evaluation	5	20

General optional units –with a minimum total credit value of 115

51	Computer Systems Architecture	3		10
7	Research Skills	4		15
9	Systems Analysis and Design		4	15
14	Website Design	4		15
20	Event Driven Programming Solutions		4	15
26	Design a Small or Home Office Network	4		15
33	Data Analysis and Design	5		15
34	Date Structures and Algorithms	5		15
35	Web Application Development	5		15
41	Programming in Java		5	15
42	Programming in .Net		5	15
43	Network Infrastructure	5		15
46	Network Security	5		15

Specialist modules will be selected by the Programme Team and will take into account the resources available and the views of learners, it is not possible to offer all specialist modules on an individual basis to learners.

Intended Learning Outcomes

The learning outcomes identify what each learner must do in order to pass the unit. Learning outcomes state exactly what a learner should 'know, understand or be able to do' as a result of completing the

unit. Learners must achieve all the learning outcomes in order to pass the unit.

Mandatory/Core curriculums are:

Business Skills for e-Commerce: understand the structure and aims of business organisations, understand the impact of e-Commerce and be able to design e-Commerce solutions.

Computer Systems: understand the function of computer systems, be able to design computer systems, be able to build and configure computer systems and be able to undertake routine maintenance on computer systems.

Employability and Professional Development: be able to take responsibility for own personal and professional development, be able to demonstrate acquired interpersonal and transferable skills, understand the dynamics of working with others and be able to develop strategies for problem solving.

Project Design, Implementation and Evaluation: be able to formulate a project, be able to implement the project within agreed procedures and to specification, be able to evaluate the project outcomes and be able to present the project outcomes.

Criteria for Admission to the Programme

Learners must be aged 18 years on or before 31st August of the academic year that the programme commences.

A minimum of 120 UCAS points which may be gained from the following qualifications:

2 x GCE 'A' Level passes

1 x GCE 'A' Level pass plus AS level passes in appropriate subjects

BTEC National Diploma or Extended Diploma

BTEC National Certificate

A Level 3 Diploma or equivalent such as NVQ, GNVQ, International Baccalaureate, Scottish Certificate of Education

A recognised (Kite marked) Access Course

Other relevant international qualifications

It is recognised that some learners may have significant relevant work experience or other professional qualifications and therefore may be admitted to the programme following a successful interview.

Teaching and Learning

A range of teaching and learning methods will be used during the programme which may include:

- Lecture
- Tutorial support groups
- Practical classroom based activities
- Group and individual presentations
- Group projects
- Independent learning/self directed study
- Work place investigations
- Online learning materials
- Work placements

It is recognised that learners learn in a variety of ways and the teaching and learning on the programme will take account of these different needs.

Support for Learning

Students are encouraged to identify and, with guidance, to reflect on their own learning needs and are offered support as appropriate to those needs.

Personal Development Planning (PDP) is a process undertaken by students to reflect upon their own learning, performance and achievement and to plan for their personal, educational and career development. It will enable you to articulate the skills you are developing in order to open up opportunities for the future.

Where specific learning needs are identified (e.g. where a disability is declared) the course team will liaise with Student Services to ensure that the requirements of the statement are met.

Students are encouraged to identify and, with guidance, to reflect on their own learning needs and are offered the following support as appropriate to meet those needs:

- A course induction programme
- Induction to learning resources
- Group project briefing sessions for students embarking upon project work, followed by regular meetings with supervisors at which progress is monitored.
- Individual tutorials
- Learning agreements
- Online resources (Moodle)
- Study skills support
- Student Handbook with information relating to the course, modules, assessment and support
- Access to college resources such as IT facilities and the Library.
- Access to Student Services, including those offered by the careers service, financial; advisers and counselling service

Assessment

A variety of assessment methods will be used on the programme. These are designed to enable learners to meet the learning outcomes for the module and experience a range of methods in preparation for further study or employment. A sample are provided below, (this is not an exhaustive list)

- Written examinations
- Coursework assignments
- Individual and group-based project work
- Practical investigations
- Group and individual presentations
- Work experience log books
- Reflective accounts
- Portfolios

Modules generally have a maximum of two assessments, for example a presentation and a written piece of course work.

Grading

Grades are awarded at module and qualification level.

Each module will be graded as a pass, merit or distinction.

A pass is awarded for the achievement of all learning outcomes against the specified assessment criteria. Merit and distinction grades are awarded for higher-level achievement

The qualification grade of a merit or distinction is awarded through the aggregation of points gained through the successful achievement of individual units. Grading of the HND is based on learner's best performance in units at the level or above of the qualification to the value of 75 credits.

The number of points available is dependent on the unit grade achieved and the credit size of the unit (as shown in the 'Points available per credit at specified unit grades' table below).

Points available per credit at specified unit grades

Points per credit		
Pass	Merit	Distinction
0	1	2

Qualification grades are:

Points Range	Grade	
0-74	Pass	P
75-149	Merit	M
150	Distinction	D

Methods for evaluating and improving the quality and standards of learning, including consideration of stakeholder feedback

Quality and standards are enhanced through:

Committees:

- Board of Studies (Student Representatives Board)
- Examination/ Award Board
- Standards Committee

Mechanisms for review and evaluation:

- Review and validation event
- Annual monitoring report
- Student feedback questionnaires
- Annual teaching appraisal
- External examiner's report
- Course team meetings
- Quality monitoring systems

External Examiners who monitor the programme are appointed by Edexcel and are recruited from similar programmes of high standing at other Higher Education Institutions or have considerable experience in the provision of HNDs in the Early Years Sector. Their work includes:

- Approving coursework assignments and assessment criteria
- Approving examination papers
- Monitoring standards through moderation of completed assessments
- Confirming assessment standards.