Level 4
BTEC Higher National Certificate

Level 5
BTEC Higher National Diploma

Pearson

Available Pathways

- Networking
- Software Engineering
- Data Analytics
- Security
- Intelligent Systems
- Applications Development

Key Features

- A stimulating and challenging programme of study that will be both engaging and memorable for students.
- The essential subject knowledge that students need to progress successfully into further study or the world of work.
- Refreshed content that is closely aligned with Professional Body, vendor, employer and higher education needs
- Unit-specific grading and Pearson-set assignments.

Developed in Collaboration with

- British Computing Society (BCS)
- Institution of Engineering and Technology (IET)
- University of Kent
- University of Hull
- Uxbridge College
- CompTIA and CISCO

HNC and HND Qualifications

- Level 4: HNC is 8 units 120 Credits (105 minimum level 4 units)
- Level 5: HND is 16 units 240 Credits (105 minimum Level 5 units)
- One Unit is 15 Credits,
  - 60 Guided Study hours
  - 150 Total Study hours
- Full-time HND 2 days a week for 2 years
- Full-time HNC 1 day a week for 1 year
- Part-time HNC 1 day a week for 2 years
- Part-time HND 1 day a week for 4 years

Core HNC and HND Units

1. Programming
2. Networking
3. Professional Practice
4. Database Design & Development
5. Security
6. Managing a Successful Computing Project (Pearson-set unit).

Optional HNC Units

- Strategic Information Systems
- Computer Systems Architecture
- Software Development Lifecycles
- Website Design & Development
- Maths for Computing
- Data Analytics

Chosen Units

HND Level 5 Units (Games Theme)

Core Units (45 Credits)

- Computing Research Project (Pearson set)
- Business Intelligence

Software Engineering Pathway

Intelligent Systems Pathway

Optional Units (5 from)

- Data Structures & Algorithms
- Advanced Programming
- Discreet Maths
- Games Engine Scripting
- Game Design Theory
- Games Development
- Robotics
- Virtual Augmented Reality
- Artificial Intelligence
- Machine Learning

HND Level 5 Units (Business Theme)

Core Units (45 Credits)

- Computing Research Project (Pearson set)
- Business Intelligence (Pearson set)

Applications Pathway

Optional Units (5 from)

- Prototyping
- Application Development
- User Experience
- E-Commerce & Strategy
- Database Management
- System Analysis & Design

Chosen Pathways

Pathway	Job Roles
Network Engineering	Network Engineer Systems Architect Computer Service and Repair Technician Network Manager
Software Engineering	Software Developer Systems Designer Business Analyst Games Developer Web Developer

2018

2017

Skills Developed

- Active research skills
- Effective writing skills
- Analytical skills
- Critical thinking
- Creative problem-solving
- Decision-making
- Team building
- Exam preparation skills
- Digital literacy
- Competence in assessment methods used in higher education.

Pass	Merit	Distinction
LO1 Use an appropriate design tool to design a relational database system for a substantial problem		**D1** Assess the effectiveness of the design in relation to user and system requirements.
P1 Design a relational database system using appropriate design tools and techniques, containing at least four interrelated tables, with clear statements of user and system requirements.	**M1** Produce a comprehensive design for a fully functional system which includes interface and output designs, data validations and data normalisation.	
LO2 Develop a fully functional relational database system, based on an existing system design		**LO2 & 3** **D2** Evaluate the effectiveness of the database solution in relation to user and system requirements, and suggest improvements.
P2 Develop the database system with evidence of user interface, output and data validations, and querying across multiple tables. **P3** Implement a query language into the relational database system.	**M2** Implement a fully functional database system which includes system security and database maintenance. **M3** Assess whether meaningful data has been extracted through the use of query tools to produce appropriate management information.	

Recommended Resources

Textbooks

Churcher, C. (2012) Beginning Database Design: From Novice to Professional. 2nd Ed. Apress.

Connolly, T. and Begg, C. (2014) Database Systems: A Practical Approach to Design, Implementation and Management. 6th Ed. Global Edition. Pearson.

Kroemke, D. and Auer, D. (2012) Database Concepts: International Edition. 6th Ed. Pearson.

Paulraj, P (2008). Database Design and Development: An Essential Guide for IT Professional. Wiley.

Stephens, R. (2008) Beginning Database Design Solutions. Wrox.

Journals

International Journal of Database Management Systems

Journal of Database Management

The Computer Journal

Journal of Systems Analysis and Software Engineering

Journal of Emerging Trends in Computing and Information Sciences

Websites

www.lynda.com	Database Training (Tutorials)
mva.microsoft.com	Microsoft Virtual Academy "Database Development" (Training)
mva.microsoft.com/ebooks	Microsoft Virtual Academy "Microsoft Press" (E-Books)

Student Voice

- How teaching and learning will take place
- Curriculum design
- Assessment strategy
- Student Representatives
- Student Forums -> Course monitoring
- Unit Feedback
- Course Feedback

Delivery Mode

Condensed version:

Weeks 1 to 6	**Week 7**	**Weeks 8 to 13**	**Week 14**
Unit 1	Assessment	Unit 3	Assessment
Unit 2		Unit 4	

Expanded version:

Weeks 1 to 12	**Weeks 13 and 14**
Unit 1	Assessment
Unit 2	
Unit 3	
Unit 4	

Assessment Methods

- Written reports, essays
- In-class tests
- Examinations
- Creation of design documents
- Creation of implementation documents
- Work-based projects
- Academic posters, displays, leaflets
- PowerPoint (or similar) presentations
- Recordings of interviews/role plays
- Working logbooks, reflective journals
- Presentations with assessor questioning
- Time-constrained assessment.

Overall Grade

- **HND Overall Distinction**:
  - 7 or 8 Level 5 Units at Distinction
  - 105 – 120 Credits at Level 5
  - 105 – 120 Credits at Level 4

- **HND Overall Merit:**
  - 7 or 8 Level 5 Units at Merit
  - 105 – 120 Credits at Level 5
  - 105 – 120 Credits at Level 4