



DEMONT
INSTITUTE *of*
MANAGEMENT
& TECHNOLOGY



Your Roadmap to **Succes** in Tech Industry

BTEC International
Level 3 **Extended**
Diploma in Information
Technology



Pearson



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Dream & Achieve with Demont

DeMont Institute of Management and Technology is among the first Technical and Vocational Education and Training (TVET) providers in the UAE. DeMont offers NCFE, CMI and Pearson programs that are accredited by the Knowledge and Human Development Authority (KHDA). We have mastered the art, science, and practice of providing quality UK education with optimum result-centric teaching methods that include pedagogical and blended forms of learning. Imparting quality education, offering accredited certifications, and delivering lessons that will alter our student experience for the better are at the care of our institution's value. DeMont aspires to pave a promising career pathway for all those who walk through the doors of the institution with the desire to learn and grow.





About the Awarding Body



Pearson, UK is the world's leading learning company operating in countries all around the world. They provide content, assessment and digital services to learners, educational institutions, employers, governments, and other partners globally. Pearson is committed to helping equip learners with the skills they need to enhance their employability prospects and succeed in the changing world of work. They strongly believe that wherever learning flourishes, people flourish as well.



INTRODUCTION TO BTEC

With a track record built over 40 years of learner success, our BTEC International Level 3 qualifications are recognised internationally by governments, industry, and higher education. BTEC International Level 3 qualifications allow learners to progress to the workplace – either directly or via study at a higher level. Over 100,000 BTEC learners apply to university every year. Their Level 3 BTECs, either on their own or in combination with A Levels, are accepted by UK and international universities, and higher-education institutes for entry to relevant degree programmes.

When creating the BTEC International Level 3 qualifications in this suite, Pearson worked with many employers, higher-education providers, colleges, and schools to ensure that their needs were met. Employers are looking for recruits who have a thorough grounding in the latest industry requirements and work-ready skills, for example, teamwork. Learners who progress to higher education need experience in research, extended writing, and meeting deadlines. BTEC qualifications provide the breadth and depth of learning to give learners this experience.

WHY CHOOSE PEARSON BTEC?

✦ Practical Learning

BTEC International Level 3 focuses on practical learning which is appealing to students who prefer a hands-on approach to education. Practical learning includes real-world projects, assignments, and assessments, that simulate actual workplace scenarios.

✦ Career-Focused

BTEC Qualifications are known for their alignment with specific career paths and industries. They are designed to prepare students for employment or further education in a particular field.

✦ Recognition

BTEC Qualifications are recognized by employers and universities in the UK and other countries around the world. They serve as a pathway to both employment and higher education.

✦ Global Perspective

BTEC International Level 3 is designed to have an international focus, which means it can be relevant to students from various countries and cultures. This global perspective can be valuable in today's interconnected world.

✦ Progression Opportunities

BTEC International Level 3 can serve as a stepping stone to higher-level qualifications, such as BTEC Higher Nationals or university degrees. Many universities and colleges accept BTEC qualifications for admission.

✦ Real-World Skills

BTEC courses often emphasize the development of practical, real-world skills that are directly applicable to the workplace. This can enhance students' employability and job prospects.

BTEC International
Level 3 **Qualifications in
Information Technology:**

Who are these Qualifications for??

Pearson BTEC International Level 3 Extended Diploma in Information Technology cater to a diverse range of learners. They are suitable for secondary school graduates aiming to specialize in IT for post-secondary studies, post-secondary students seeking to enhance their IT skills or transition into IT careers, working IT professionals seeking formal recognition of their skills, career changers looking to establish a foundation in IT, and international students desiring an international perspective on IT education. These qualifications cover various IT topics, offering practical skills and knowledge applicable to the industry or further IT-related studies, making them accessible and valuable for a broad audience.



Key Learnings of the BTEC International Level 3 Qualifications in Information Technology:

- ✦ Be able to explain the relationships between hardware and software in IT systems, demonstrating a clear understanding of how they interact.
- ✦ Investigate project management principles and methodologies used in the IT industry and successfully deliver an IT project, covering all project stages.
- ✦ Evaluate the impact of IT systems on organizations and their stakeholders, considering both positive and negative effects.
- ✦ Acquire fundamental coding and scripting skills, including shell scripting, to perform and automate technical tasks.
- ✦ Gain partial coverage of content from the Microsoft Azure Data Fundamentals Certification, acquiring knowledge of Azure services and concepts.
- ✦ Apply computational thinking skills to design, develop, test, refine, and review computer programs for specific purposes.
- ✦ Analyse existing websites, providing feedback on their design and effectiveness, and suggesting improvements.
- ✦ Learn data modelling techniques to support decision-making processes, including creating spreadsheets for accurate information presentation.
- ✦ Demonstrate proficiency in scripting languages such as HTML, CSS, and JavaScript, and apply them to create functional web content.
- ✦ Identify critical support areas and roles in IT system management, gaining practical experience in tasks such as software updates, user access adjustments, and system optimization.
- ✦ Explore the application of robotics and automation in various industries, understanding how hardware, software, and data components work together to automate processes.
- ✦ Explore the use of AI in problem-solving, data collection, and analysis, culminating in the development of AI solutions for identified problems.



About The Pearson BTEC International Level 3 Extended Diploma in Information Technology:

The Pearson BTEC International Level 3 Extended Diploma in Information Technology is a rigorous and comprehensive program carefully crafted to offer learners a profound grasp of Information Technology (IT) principles and hands-on expertise. This globally acclaimed diploma empowers learners with the essential knowledge and skills required to thrive in the dynamic IT industry and serves as a solid groundwork for pursuing further education in IT-related disciplines.

Programme Overview

The Pearson BTEC International Level 3 Extended Diploma in Information Technology is a comprehensive program tailored for individuals with aspirations for a career in the dynamic field of information technology. Meticulously designed, this program equips learners with the essential knowledge and skills to thrive in the IT industry or seamlessly transition into higher education pathways.

This diploma offers a well-rounded educational experience that seamlessly integrates practical skills with academic knowledge. Graduates emerge well-prepared to excel in the IT industry or embark on higher education journeys, making it a valuable investment in their future. The program's alignment with industry standards, extensive curriculum, and adaptability ensure that learners are fully prepared for the ever-evolving landscape of Information Technology.

MODULE LIST

Module
Information Technology Systems - Strategy, Management, and Infrastructure
Website Development
Introduction to Robotics and Automation
IT Project Management
Technical Fundamentals for Computing Professionals
Programming
Data Modelling
IT Technical Support and Management
Emerging Trends and Technologies
Introduction to Artificial Intelligence (AI)
Big Data and Business Analytics
Full Stack Development
Enterprise in IT
Cyber Security and Incident Management
Creating a System to Manage Information



» Information Technology Systems – Strategy, Management, and Infrastructure

Through this module, students will explore the relationships between the hardware and software that form the IT system. They will examine the issues related to the use of IT systems and the impact that they have on an organization and its stakeholders. The module will provide students with a fundamental understanding of all areas of IT, supporting their progression to an IT-related higher education course. The module will also provide partial coverage to content from Microsoft Azure Data Fundamentals Certification.

Learning Outcomes

- ✦ Explore how IT infrastructure meets the needs of organisations and their stakeholders.
- ✦ Understand how organisations make use of data and information.
- ✦ Develop policies for the use of IT within an organisation.



» Website Development

In this module, students will review existing websites – commenting on their overall design and effectiveness. They will review the use of scripting languages such as Hypertext Markup Language (HTML), Cascading Style Sheets (CSS) and JavaScript® and a simple text editor, or rapid application development tools. Finally, they will be able to reflect on the website design and functionality using a testing and review process.

Learning Outcomes

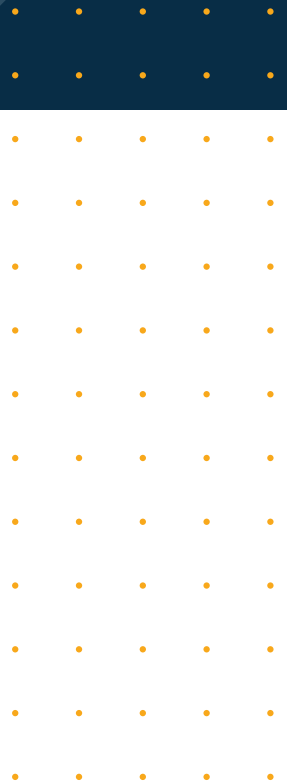
- ★ Understand the principles of website development.
- ★ Design a website to meet client requirements.
- ★ Develop a website to meet client requirements.

» Introduction to Robotics and Automation

Through this module, students will explore how robotics and automation are used in different industries to solve problems and meet a range of needs. Students will explore physical and non-physical ‘robots’ and how the different hardware, software, and data components of a system are used to automate processes. Additionally, students will design and build a physical robot in response to an identified problem.

Learning Outcomes

- ★ Investigate the use of automation and robotics.
- ★ Design an automated solution for an identified need.
- ★ Produce an automated solution for an identified need.





» IT Project Management

In this module, students will investigate the principles of project management and different project management methodologies, as used in the IT industry. Students will deliver an IT project using at least one project management methodology and complete the five main stages of a project. They will initiate the project by researching a problem and using their creative skills to generate a range of solutions, undertaking a feasibility study to select an appropriate solution and outline the requirements of the project.

Learning Outcomes

- ★ Investigate the principles and methodologies of IT project management as used in industry.
- ★ Carry out a project initiation for an IT project.
- ★ Carry out the planning, execution, monitoring and controlling of an IT project, using an appropriate methodology.
- ★ Undertake the closure of a project by reflecting on the success of personal performance and the project outcome.

» Technical Fundamentals for Computing Professionals:

In this module, students will explore the basic coding and scripting skills that will be useful in a range of technical roles. They will explore the fundamentals of coding and explore how to use shell scripting to perform and automate work tasks. Students will explore the fundamentals of coding and how to use shell scripting to perform and automate work tasks. They will explore how to use shell scripting to perform and automate work tasks. They will explore wider issues relating to the use of technology that can impact the workplace.

Learning Outcomes

- ★ Explore the mathematics, logic, and processes of computer systems.
- ★ Investigate issues relating to the use of digital systems.
- ★ Design a computer infrastructure solution.

» Programming

Through this module, students will learn about computational thinking skills and the principles of designing and developing computer programs. They will apply computational thinking skills to design, develop, test, refine and review computer programs for a given range of purposes.

Learning Outcomes

- ★ Examine the computational thinking skills and principles of computer programming.
- ★ Design a software solution to meet client requirements.
- ★ Develop a software solution to meet client requirements.

» Data Modelling

Through this module, students will investigate the fundamentals of the decision-making process. They will find out how to use data modelling to provide the computational ability to compare consequences and determine a preferred course of action. This module will help student's skills and techniques necessary to create spreadsheets to produce accurate information that informs decision-making.

Learning Outcomes

- ★ Investigate data modelling and how it can be used in the decision-making process.
- ★ Design a data model to meet client requirements.
- ★ Develop a data model to meet client requirements.

» IT Technical Support and Management

In this module, students explore IT system support and management in organizations, pinpointing critical support areas and diverse roles. Legal and regulatory considerations for employee safety and productivity are examined. Practical hands-on tasks, such as software updates, user access adjustments, system monitoring, and optimization, are central. Students also develop professional conduct skills, enhancing their IT industry readiness.

Learning Outcomes

- ★ Examine the IT system support and management needs and characteristics of different organizations, which are essential to their operation.
- ★ Carry out routine support and management activities on IT systems.
- ★ Develop a plan to support and manage a new IT system using industry standards and methods.



» Emerging Trends and Technologies

In this module, students examine computing advancements and their societal impact. They learn to design, develop, and test cloud-based solutions for specific problems, aligning with client requirements. The process includes analyzing client needs, proposing and documenting a comprehensive solution, and crafting a cloud-based system with both front-end and back-end components. The module emphasizes iterative development, with continuous testing and refinement of the solution.

Learning Outcomes

- ✦ Investigate developments in computing.
- ✦ Design a cloud computing solution to meet identified requirements.
- ✦ Deploy a cloud computing solution to meet identified requirements.

» Introduction to Artificial Intelligence (AI)

In this module, students will explore how AI is used in different industries to solve problems, inform decisions and improve performance. They will explore the important role data has in AI systems, how different algorithms are used to draw meaningful information from data, and how in turn these systems can 'learn'. They will collect and prepare data, and apply computing resources, to develop an AI solution in response to an identified problem.

Learning Outcomes

- ✦ Investigate the uses and applications of AI.
- ✦ Plan and prepare an AI solution to meet identified needs.
- ✦ Develop an AI solution to meet identified needs.

» Big Data and Business Analytics

In this unit, students will investigate how and why organizations collect data and the methods they use to store and analyze it. They will explore a range of methods to present data for different audiences and purposes, and statistical methods used to analyze data. You will use software to analyze a data set to provide information that could inform business plans and improve profitability.

Learning Outcomes

- ★ Investigate the role of big data and business analytics to improve performance, for benchmarking and/or to trigger innovation in organizations.
- ★ Explore the statistical software tools and techniques used to analyze data in organizations.
- ★ Carry out analysis of statistical data to meet the needs of an organization.

» Full Stack Development

In this module, students initially delve into the utilization and application of full-stack development tools and technologies for problem-solving. They proceed to grasp the methods for designing, developing, and testing full-stack solutions to address specific issues. The process involves analyzing client requirements, creating a proposal and comprehensive design documentation and ultimately crafting a full-stack solution employing the complete deployment stack. Throughout, an iterative approach to development, including testing and refinement, is emphasized, culminating in an evaluation against client expectations.

Learning Outcomes

- ★ Explore tools and technologies for full-stack development.
- ★ Design a full-stack solution for an identified client.
- ★ Develop a full-stack solution for an identified client.

» Enterprise in IT

This module aims to educate students about entrepreneurship by exploring the traits of entrepreneurs, the strategies they employ, and their impact on establishing and managing enterprises. It will assess whether students possess the necessary entrepreneurial skills to initiate an IT-based business. Upon identifying a potential IT product or service, they will conduct market research to determine customer demand and preferences, including features that are well-received and those that are not. Subsequently, students will develop a comprehensive marketing plan to boost sales and secure the financial resources essential for the sustainability of their enterprise.

Learning Outcomes

- ✦ Explore the nature of enterprise and entrepreneurship in an IT context.
- ✦ Develop a marketing plan for an IT product or service based on market research.
- ✦ Present a plan for a start-up IT enterprise using lean or traditional business principles.



» Cyber Security and Incident Management

Within this module, students will explore various cybersecurity attack types, the vulnerabilities inherent in networked systems, and the methods employed to safeguard an organization's networked infrastructure. They will delve into the strategies for evaluating risks and formulating strategies to address the aftermath of a cyber security incident, as well as for restoring systems post-incident. Students will scrutinize scenarios, perform risk assessments, and develop protective plans before fortifying networked systems. Moreover, they will analyze evidence from cyber security incidents and pertinent security documentation, leveraging this information to offer recommendations for enhancement.

Learning Outcomes

- Understand cyber security threats, system vulnerabilities and security protection methods.
- Explore the security implications of networked systems.
- Develop a cyber security protection plan for a specified organization.
- Examine procedures to collect forensic evidence following a security incident.

» Creating Systems to Manage Information

In this module, students will investigate the composition and sources of data, as well as how a well-organized data design leads to an efficient solution in the form of a database system. They will subsequently validate their solution to ensure its accuracy and functionality. Furthermore, they will assess each phase of the development process and gauge the effectiveness of their database solution.

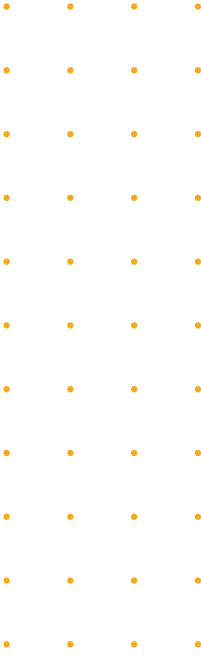
Learning Outcomes

- ★ Understand the purpose and structure of relational database management systems.
- ★ Design a relational database to meet client requirements.
- ★ Develop a relational database to meet client requirements.

Key Features

- ✦ Provides learners with industry expertise, adaptable skills, and professional behaviors to ready them for a profession or further education
- ✦ Adaptable and modular course design to accommodate existing curriculum demands
- ✦ Streamlines the undergraduate academic journey by establishing a solid groundwork in information technology
- ✦ Widely acknowledged by numerous universities and higher education institutions globally as an entry requirement for relevant first-year degree programs and Higher National programs
- ✦ Offers internationally applicable content that closely aligns with the requirements of employers and higher-education institutions.





Minimum Eligibility

Students who have successfully completed secondary schooling are eligible to enrol for BTEC Level 3 Extended Diploma in Information Technology.

Who Is This Programme for?

The Pearson BTEC International Level 3 Information Technology qualifications are tailored for individuals keen on exploring the field of information technology. These qualifications prepare learners to potentially pursue various higher-education paths and opportunities in the IT industry upon completion. By covering a diverse array of IT subjects, this program equips learners to advance in higher education within the IT field or related sectors. Ultimately, it aims to facilitate their journey toward employment.



Top Skills you will Learn

All BTEC International Level 3 qualification provides a valuable set of competencies that can be readily employed in university studies. These adaptable skills are highly esteemed by universities and encompass the capacity for self-directed learning, adept research methodologies, and proficient engagement in both presentations and collaborative endeavors. Through the vocational framework presented by BTEC International Level 3 qualifications, learners can cultivate the essential proficiencies required for particular degree programs. These include analytical capabilities, creative aptitude, and preparedness for the assessment approaches frequently utilized in higher education.





Future Prospects

These qualifications provide learners with the opportunity to progress into higher education and pursue further academic endeavors. These may include enrolling in programs like a BTEC Higher National in Computing, pursuing a degree in information technology, or joining degree programs where proficiency in information technology can be advantageous, such as in the field of business studies. Moreover, they are also well-suited for learners seeking to acquire the essential knowledge and skills for vocational apprenticeship roles and preparing for entry-level job opportunities. Higher-education institutions widely acknowledge the value of these qualifications and typically accept them as meeting admission criteria for a wide range of relevant courses across various IT sectors.



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