

**University of Plymouth  
Academic Partnerships**

**Truro & Penwith College**

# **Programme Quality Handbook**

**FdSc Computer Technology**

**2024-25**

# Contents

<a href="#">Welcome and Introduction</a>	<a href="#">3</a>
<a href="#">Programme Specification</a>	<a href="#">4</a>
<a href="#">Module Records: Level 4</a>	<a href="#">15</a>
<a href="#">Module Records: Level 5</a>	<a href="#">29</a>



# WELCOME AND INTRODUCTION

## Welcome and Introduction to FdSc Computing Technologies

Welcome to the Foundation Degree in Computing Technologies. This programme has been devised to develop a wide range of employable skills and knowledge in the field of computing, and is the result of consultations with employers, experts and University of Plymouth, as well as the specialist skills of staff involved in the programme. In it you will build on some aspects of computing that you already know, but will also come across new and challenging work that will broaden your expertise and make you aware of new possibilities. Apart from learning about computer systems and networks, you will also be developing skills in digital media, web sites, databases and working with real clients and organisations. Particularly in the second year you will be developing skills to prepare you for higher level employment.

This programme has been designed to equip you with the skills and knowledge relevant to your chosen specialism and other graduate opportunities. It is also a platform from which you can undertake additional vocational and academic qualifications.

This Programme Quality Handbook contains important information including:

- The Approved Programme Specification
- Module Records

**Note:** the information in this handbook should be read in conjunction with: the [University Centre Student Handbook](#) (on SharePoint) which contains information on issues such as finance, student support, careers, learning resources and studying at University Centre Truro and Penwith; the University of Plymouth Student Handbook <https://www.plymouth.ac.uk/your-university/governance/student-handbook>; and your Teaching, Learning and Assessment Handbook available on SharePoint.

# Programme Specification

## 1. Award

**Final Award Title: FdSc Computing Technologies**

**Level 4 Intermediate award title: Certificate of Higher Education**

**UCAS Code: I100**

**HECoS Code: 100358**

## 2. Awarding Institution: University of Plymouth

**Teaching Institution: Truro and Penwith College**

## 3. Accrediting Body(ies)

None

## 4. Distinctive Features of the Programme and the Student Experience

- Expert staff including experienced industry professionals.
- Valuable networking opportunities within Cornwall and the UK, including through organisations such as Software Cornwall
- Opportunities to undertake placements with a range of businesses within the digital sector.
- Curriculum designed in collaboration with industry aligning to industry skills gaps and employable skills.
- Module alignment to industry/vendor qualifications
- Access to specialist resources in Valency SWIOT building at Truro Campus and Ottery STEM centre at Bodmin (due to open in September 2023).
- Flexibility across the timetable, the programme will be timetabled to reflect the need and demand of its students and as such has responded by offering a condensed timetable to support its learners.
- The college has recently embarked on implementing its new University Centre Wide structure of student rep governance. This new structure is a highly visible and transparent mechanism, which supports student voice experience and where students are very much part of the higher education setting across multiple aspects. The students on this award will be a part of this activity.

- The college is embarking on the creation of a student social group which will add to the sense of belonging for the students. This will include activities, visits, societies and events.
- Group activities during workshop led sessions, which will enable students to partake in cooperative working practices.
- Opportunities across the course for students to apply and combine practical and research skills learnt in the production of their own outcomes which could be interdisciplinary in nature.
- Tailored careers advice and support for up to five years after graduation will remain for Alumni to offer ongoing assistance.
- 

## 5. Relevant QAA Subject Benchmark Group(s)

the programme development was informed by the following:-

[Framework for Higher Education \(FHEQ\) programmes at level 4 and 5](#) (2014)

[Subject Benchmark Statement: Computing \(qaa.ac.uk\)](#) (2022)

[SEEC-Credit-Level-Descriptors-2021.pdf](#)

[Characteristics Statement: Foundation Degree \(qaa.ac.uk\)](#) (2020)

## 6. Programme Structure

### 6.1. Full-time Route

YEAR 1 (LEVEL 4)				
Module Code	Module Title	Credits	Core / Optional	Term / Semester
<a href="#">TRUR1294</a>	Networking And Systems	20	Core	1/2
<a href="#">TRUR1298</a>	Website Development	20	Core	1
<a href="#">TRUR1296</a>	Data Management	20	Core	1
<a href="#">TRUR1297</a>	Introductory Programming	20	Core	1/2
<a href="#">TRUR1295</a>	Systems Analysis and Design	20	Core	2
<a href="#">TRUR1299</a>	Behavioural Analytics & Data Security	20	Core	2

Credits = 120 L4 Credits.

YEAR 2 (LEVEL 5)				
Module Code	Module Title	Credits	Core / Optional	Term / Semester
<a href="#">TRUR2298</a>	Agile Project Management	20	Core	1/2
<a href="#">TRUR2299</a>	Data Structures and Algorithms	20	Core	1/2
<a href="#">TRUR2300</a>	System Development Project	20	Core	1/2
<a href="#">TRUR2301</a>	Work Placement & Current Issues	20	Core	1/2
<a href="#">TRUR2302</a>	Network Security & Design	20	Core	1
<a href="#">TRUR2303</a>	Digital Forensics	20	Core	2

Credits = 120 L5 Credits.

## 6.2. Part-time Indicative Route

YEAR 1 (LEVEL 4)				
Module Code	Module Title	Credits	Core / Optional	Term / Semester
<a href="#">TRUR1294</a>	Networking And Systems	20	Core	1/2
<a href="#">TRUR1295</a>	Systems Analysis and Design	20	Core	1
<a href="#">TRUR1298</a>	Website Development	20	Core	2

Credits = 60 L4 credits.

YEAR 2 (LEVEL 4)				
Module Code	Module Title	Credits	Core / Optional	Term / Semester
<a href="#">TRUR1296</a>	Data Management	20	Core	1
<a href="#">TRUR1297</a>	Introductory Programming	20	Core	1/2
<a href="#">TRUR1299</a>	Behavioural Analytics & Data Security	20	Core	2

Credits = 60 L4 credits

YEAR 3 (LEVEL 5)				
Module Code	Module Title	Credits	Core / Optional	Term / Semester
<a href="#">TRUR2298</a>	Agile Project Management	20	Core	1/2
<a href="#">TRUR2299</a>	Data Structures and Algorithms	20	Core	1/2
<a href="#">TRUR2300</a>	System Development Project	20	Core	1/2

Credits = 60 L5 credits

YEAR 4 (LEVEL 5)				
Module Code	Module Title	Credits	Core / Optional	Term / Semester
<a href="#">TRUR2301</a>	Work Placement & Current Issues	20	Core	1/2
<a href="#">TRUR2302</a>	Network Security & Design	20	Core	1
<a href="#">TRUR2303</a>	Digital Forensics	20	Core	2

Credits = 60 L5 credits

## 7. Programme Aims

- A1. Develop a comprehensive understanding of computer systems, computer networks, hardware and applications.
- A2. To develop an understanding of software development derived from a variety of sources and to communicate the principles in a manner appropriate to the programme of study.
- A3. To develop the knowledge, understanding and skills required for progression into employment or further study into the wider digital industry.
- A4. To develop students' commitment to subsequent role development and lifelong learning, acting autonomously to achieve learning needs and acknowledging the need to meet relevant occupational standards.
- A5. develop student's knowledge of their responsibilities as IT security practitioners. An awareness of the cultural, economic, ethical, legal, political and social dynamics will be developed to inform effective working environments.

## 8. Programme Intended Learning Outcomes

### 8.1. Knowledge and understanding

On successful completion graduates should have developed:

- 8.1.1. a knowledge and understanding of a range of Cyber Security threats and mitigation



- 8.1.2. A broad understanding and knowledge of wider digital concepts, changing computing technologies and trends, including emergent technologies, environmental issues.
- 8.1.3. Knowledge of their responsibilities as software engineers and IT professionals, with an awareness of cultural, economic, ethical, legal, political, and social dynamics which shape effective working environments
- 8.1.4. An understanding of the fundamental programming concepts.
- 8.1.5. An understanding of the computing sector enabling identification and evaluation of employment and further education opportunities.

## **8.2. Cognitive and intellectual skills**

On successful completion graduates should be able to:

- 8.2.1. Apply analytical and evaluative skills, to solve unfamiliar industry/non-industry related problems.
- 8.2.2. Evaluate the use of logic, algorithms, and data structures relevant to software development.
- 8.2.3. Apply Skills for academic and independent study appropriately
- 8.2.4. Plan, design, implement and test solutions which effectively solve problems and meet requirements.

## **8.3. Key and transferable skills**

On successful completion graduates should have developed the ability to:

- 8.3.1. Communicate problem, solutions, ideas, and technical concepts to technical and non-technical stakeholders.
- 8.3.2. Identify, locate, and access information, developing the skills and abilities for independent learning

- 8.3.3. Work with others to set goals, integrate information, and make appropriate decisions.

#### **8.4. Employment related skills**

On successful completion graduates should have developed:

- 8.4.1. Planning and organisational skills managing own workflows and schedules.
- 8.4.2. The ability to act with integrity with respect to ethical, legal and regulatory requirements, ensuring the protection of personal data, safety and security.
- 8.4.3. An understanding of how teams work effectively to produce software and how to contribute appropriately.
- 8.4.4. A proficiency with a variety of programming languages, development techniques and industry best practices.

#### **8.5. Practical skills**

On successful completion graduates should have the ability to:

- 8.5.1. Demonstrate the ability to design, install and configure networks, systems and applications within specific contexts and produce solutions and/or alternatives.
- 8.5.2. Develop as appropriate, specific proficiencies in using a range of current and emergent Cyber Security and Computer technologies.
- 8.5.3. Follow a logical and systematic approach to problem solving using critical thinking, initiative and analysis and evaluation
- 8.5.4. Apply specialist skills across the wider computing and software development discipline including data management, website development, analytics and computational thinking.

## 9. Admissions Criteria, including APCL, APEL and Disability Service arrangements

All applicants must have GCSE (or equivalent will be considered) Maths and English at Grade 4/C or above plus a relevant level 3 qualification. Applicants will be interviewed to assess the experience/capabilities for successful entry and completion of the course.

Entry Requirements for FdSc Computing Technologies	
Level 3: at least one of the following: - AS/A Levels - Advanced Level Diploma - T level's - BTEC National Certificate/Diploma - VDA: AGNVQ, AVCE, AVS - Access to HE or Year 0 provision - International Baccalaureate - Irish/Scottish Highers/Advanced Highers	48 UCAS points from relevant Level 3 qualification. Maths GCSE level 4 or equivalent.  Achievement of an Access to HE Diploma
Work Experience	Considered on an individual basis through an interview process.
Other HE qualifications / non-standard awards or experiences	Considered on an individual basis through an interview process.
APEL / APCL possibilities	APEL/APCL will be considered as per University of Plymouth Regulations
Interview / Portfolio requirements	All students will be interviewed
Independent Safeguarding Agency (ISA) / Disclosure and Barring Service (DBS) clearance required	Students are expected to purchase a current DBS, if required for placement.

Apply online at [www.ucas.com](http://www.ucas.com). For further information on the admissions process contact [heEnquiry@truro-penwith.ac.uk](mailto:heEnquiry@truro-penwith.ac.uk) or 01872 305746.

## 10. Progression criteria for Final and Intermediate Awards

Students who successfully complete the FdSc Computing Technologies may progress onto higher levels of study at Truro & Penwith College such as:

- BSc (Hons) Applied Computing Technologies at Truro and Penwith

Alternative progression routes at UoP include:

- BSc (Hons) Computer Science at the University of Plymouth
- BSc (Hons) Computer Science (Software Engineering) at the University of Plymouth
- BSc (Hons) Computer Science (Cyber Security) at the University of Plymouth

Upon successful completion of the FdSc Computing Technologies, students may be suited to work in a variety of settings and these opportunities include, but are not limited to the following job roles:

- Software Developer
- Application Developer
- Games Developer
- Programmer
- Software Tester
- Mobile App developer
- AI Developer
- Big Data analyst
- Network Engineer
- Network Technician
- Cyber Security Professional

As well as Student Services and Personal Tutor support, Truro and Penwith College also has an HE Employability and Careers advisor available for guidance for students and graduates.

## **11. Non-Standard Regulations**

N/A

## **12. Transitional Arrangements**

Students on the existing programme will be supported through to completion of the current specification.

## Appendices

### Appendix A: Programme Specification Mapping

Module contribution to the meeting of Programme Learning Outcomes

CORE MODULES: tick those Programme Learning Outcomes the module contributes to through its assessed learning outcomes.

Core Modules		Programme Learning Outcomes contributed to (for more information see Section 8)																				Compensation Y/N	Assessment Element(s) and weightings E1- exam T1- in-class test C1- coursework P1 - practical
		8.1 Knowledge & understanding					8.2 Cognitive & intellectual skills				8.3 Key & transferable skills			8.4 Employment related skills				8.5 Practical skills					
		8.1.1	8.1.2	8.1.3	8.1.4	8.1.5	8.2.1	8.2.2	8.2.3	8.2.4	8.3.1	8.3.2	8.3.3	8.4.1	8.4.2	8.4.3	8.4.4	8.5.1	8.5.2	8.5.3	8.5.4		
Level 4	TRUR1294 Networking and Systems	X					X				X			X				X	X			Y	E1 – 50% O1 – 50%
	TRUR1295 Systems Analysis and Design		X	X					X			X			X					X	X	Y	C1 -100%
	TRUR1296 Data Management		X	X				X				X				X					X	Y	C1 – 70% P1 – 30%
	TRUR1297 Introductory Programming				X		X	X	X	X											X	Y	C1 – 70% P1 – 30%
	TRUR1298 Website Development		X	X	X				X	X					X		X					Y	C1 – 70% P1 – 30%
	TRUR1299 Behavioural Analytics and Data Security	X	X			X		X			X										X	Y	C1 – 70% P1 – 30%
Level 4 LOs		X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		
Level 5	TRUR2298 Agile Project Management			X					X		X	X	X				X		X	X	X	Y	P1 – 100%
	TRUR2299 Data Structures and Algorithms		X		X			X												X	X	Y	C1 – 100%
	TRUR2300 System Development Project						X		X			X	X	X		X		X			X	Y	C1 – 70% P1 – 30%
	TRUR2301 Work Placement and Current Issues					X	X					X	X	X	X						X	Y	C1 – 70% P1 – 30%
	TRUR2302 Network Security and Design								X					X					X			Y	C1 – 50% O1 – 50%
	TRUR2303 Digital Forensics						X		X	X					X				X	X	X	Y	C1 – 50% O1 – 50%
Level 5 LOs			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Confirmed Programme LOs		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

## Appendix B: Work Based/Related Learning Mapping

The following table demonstrates examples of where work based/related learning could take place across level 4 and 5.

		Employer Led Workshops	Industry or Work Placement	Business Related Projects or Assessments	Employer Talks	Industry Mentoring	Mock Interviews	Curriculum linked Trips/Visits
Level 4	TRUR1294 Networking and Systems	X			X			X
	TRUR1295 Systems Analysis and Design							
	TRUR1296 Data Management				X			
	TRUR1297 Introductory Programming			X				X
	TRUR1298 Website Development			X				X
	TRUR1299 Behavioural Analytics and Data Security	X						
Level 5	TRUR2298 Agile Project Management			X	X			X
	TRUR2299 Data Structures and Algorithms							
	TRUR2300 System Development Project			X	X	X		
	TRUR2301 Work Placement and Current Issues		X				X	X
	TRUR2302 Network Security and Design	X			X			X
	TRUR2303 Digital Forensics			X				

# LEVEL 4

## MODULE RECORDS





## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR1294      **MODULE TITLE:** Networking & Systems  
**CREDITS:** 20      **FHEQ LEVEL:** 4      **HECoS CODE:** 100365 Computer Networks  
**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes  
**SHORT MODULE DESCRIPTOR:** *(max 425 characters)*

This module introduces students to the foundation topic underlying the design, implementation operation and structure of both networks, systems and their components. Issues such as installation configuration, maintenance and security will be addressed.

ELEMENTS OF ASSESSMENT – see <a href="#">Definitions of Elements and Components of Assessment</a>					
<b>C1</b> (Coursework)		<b>E1</b> (Examination)	50%	<b>P1</b> (Practical)	
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)	50%		

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- To develop an understanding of the basic concepts underlying computer networks and computer systems.
- To describe communication principles, protocols, transmission techniques, system components and structure.
- Develop knowledge of skills relevant to design, implementation, configuration of systems and networks.
- Investigate computer and networked systems problems and suitable solutions

**ASSESSED LEARNING OUTCOMES:** *(refer to Programme Specification for relevant Programme Intended Learning Outcomes)*

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Describe the relevance of the OSI/TCP/IP models and its relevance to networks.	8.1.1
2. Produce, plan, and evaluate implementation of systems and networks for a given purpose.	8.2.1, 8.4.1, 8.5.1
3. Report on problems encountered with networks and systems, advise on appropriate solutions.	8.1.1, 8.3.1, 8.4.1, 8.5.2
4. Explain the functions and operation of computer systems, including hardware and memory management.	8.2.1, 8.3.1, 8.5.2

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-23	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1/2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be used in the UNISTATS return and published on the extranet as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Dave Cook	<b>OTHER MODULE STAFF:</b> Clint Washington
<b>SUMMARY OF MODULE CONTENT:</b> An understanding of the operation, structure of computer systems are necessary for their effective use. Today's ubiquitous computing world everything is connected and networks are vital part of modern computer systems. This module introduces the theory, practice of networked systems through a range of activities from design, configuration, implementation and trouble-shooting. Both performance and network security methods are studied using a mixture of virtual and physical technologies	

<b>SUMMARY OF TEACHING AND LEARNING</b> <i>(Refer to HESA KIS definitions)</i>		
<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	15	
Practical classes and workshops	30	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

<b>SUMMATIVE ASSESSMENT</b>		
<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Work Based Networking and Systems (ALO 1, 4)	100%
Online Open Book Assessment	01 – Network and Systems (ALO, 2, 3)	100%

<b>REFERRAL ASSESSMENT</b>		
<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Work Based Networking and Systems (ALO 1, 4) New Piece	100%
Online Open Book Assessment	01 – Network and Systems (ALO, 2, 3) – New Piece	100%

<b>To be completed when presented for Minor Change approval and/or annually updated</b>	
<b>Updated by:</b> Date:	<b>Approved by:</b> Date:

## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR1298      **MODULE TITLE:** Website Development

**CREDITS:** 20      **FHEQ LEVEL:** 4      **HECoS CODE:** 100375 web and multimedia design

**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes

**SHORT MODULE DESCRIPTOR:** *(max 425 characters)*

This module enables learners to design and develop dynamic websites. Throughout the module learners will understand and apply appropriate web protocols, languages and standards to create functional high-quality websites. Emphasis will be on the effective use of information architecture, responsive design and web accessibility to enhance user experience.

**ELEMENTS OF ASSESSMENT** – see [Definitions of Elements and Components of Assessment](#)

<b>C1</b> (Coursework)	70%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	30%
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- To develop a working knowledge of the skills, languages, standards and concepts required to create functional, high-quality and accessible websites.
- To be able to design websites appropriate for various users and business cases.
- To understand the process of deploying a website for online use.
- To understand and apply appropriate processes and techniques in the design of mobile first and responsive web applications.
- Work effectively as part of a group.

**ASSESSED LEARNING OUTCOMES:** *(refer to Programme Specification for relevant Programme Intended Learning Outcomes)*

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Demonstrate an understanding of usability, accessibility, security considerations and use of standards when designing websites.	8.1.2, 8.1.3
2. Use appropriate coding languages to develop and test functional dynamic web pages.	8.1.4, 8.2.4, 8.4.4
3. Demonstrate the ability to make appropriate judgements when selecting frameworks for website development.	8.2.3
4. Work effectively as part of a group.	8.4.2

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-23	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1
<b>MODE OF DELIVERY:</b> Blended Learning	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be published on the website as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Naomi Johns-Dyer	<b>OTHER MODULE STAFF:</b> John Glazebrook, Mark Williams
<b>SUMMARY OF MODULE CONTENT:</b>  This module covers various design and development concepts relevant to the design and development of dynamic websites including: usability, accessibility, design and development standards, security in relation to websites, website development technologies, configuration and maintenance of web servers, client-side programming, markup languages, frameworks, testing websites against requirements.	

<b>SUMMARY OF TEACHING AND LEARNING</b> <i>(Refer to HESA KIS definitions)</i>		
<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	25	
Practical classes and workshops	20	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Designing and Developing Websites (ALO 1, 2, 3)	100%
Practical	P1 – Testing and Evaluation of Websites (ALO 4) Group Work Presentation	100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Developing Websites for business use. (ALO 1, 2, 3) New Piece	100%
Practical	P1 – Testing and Evaluation of Websites (ALO 4) New Piece Presentation	100%

<b>To be completed when presented for Minor Change approval and/or annually updated</b>	
<b>Updated by:</b> Date:	<b>Approved by:</b> Date:

## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR1296      **MODULE TITLE:** Data Management  
**CREDITS:** 20      **FHEQ LEVEL:** 4      **HECoS CODE:** 100754 databases; 100755 data management  
**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes

**SHORT MODULE DESCRIPTOR:** (max 425 characters)

This module introduces the concepts of the management of organisational data using DBMS's. Learners will design and develop relational and NoSQL databases, as well gaining an understanding of the procedures and protocols and ethics that require consideration when managing, controlling and securing data.

**ELEMENTS OF ASSESSMENT** – see [Definitions of Elements and Components of Assessment](#)

<b>C1</b> (Coursework)	70%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	30%
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

**MODULE AIMS:**

- Introduce the concept of database systems for information management.
- To introduce the concept of relational modelling and the key data management concepts required to store data appropriately in databases.
- Learners will design, implement and test relational and NoSQL databases, and will apply queries to data.

**ASSESSED LEARNING OUTCOMES:** (refer to Programme Specification for relevant Programme Intended Learning Outcomes)

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Explain the principles and uses of relational and non-relational databases.	8.1.2, 8.3.2
2. Demonstrate appropriate storage and treatment of GDPR sensitive data.	8.1.3, 8.4.3
3. Design, develop and test a range of data models and schemas.	8.2.2, 8.5.4
4. Undertake query processing on data held in databases.	8.5.4

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-23	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1
<b>MODE OF DELIVERY:</b> Blended Learning	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be published on the website as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Naomi Johns-Dyer	<b>OTHER MODULE STAFF:</b> Mark Williams, John Glazebrook
<b>SUMMARY OF MODULE CONTENT:</b>  This module covers:  Database Design, ER modelling and relational database modelling Different types of databases including Relational and NoSQL Data management protocols, processes and legislative requirements and the processing data including queries.	

<b>SUMMARY OF TEACHING AND LEARNING</b> <i>(Refer to HESA KIS definitions)</i>		
<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	25	
Practical classes and workshops	20	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Understanding DBMS's (ALO 1)	100%
Practical	P1 - Developing data management systems (ALO 2, 3, 4) Portfolio	100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Database Systems (ALO 1) New Piece	100%
Coursework (in lieu of the original assessment)	P1 – Creating DBMS's (ALO 2,3,4) New Piece	100%

<b>To be completed when presented for Minor Change approval and/or annually updated</b>	
<b>Updated by:</b> Date: Jan-23	<b>Approved by:</b> Date:

## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR1297      **MODULE TITLE:** Introductory Programming

**CREDITS:** 20      **FHEQ LEVEL:** 4      **HECoS CODE:** 100374 software engineering

**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes

**SHORT MODULE DESCRIPTOR:** *(max 425 characters)*

The module is an introduction to fundamental programming concepts. Throughout this module, learners will develop the knowledge required to understand, design and code computer programs and will understand and apply the principles underlying the software development process.

#### ELEMENTS OF ASSESSMENT – see [Definitions of Elements and Components of Assessment](#)

<b>C1</b> (Coursework)	70%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	30%
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- To develop an understanding of programming through designing and developing code to given requirements.
- To implement, test and debug simple programs.
- To introduce the principles of algorithms.

**ASSESSED LEARNING OUTCOMES:** *(refer to Programme Specification for relevant Programme Intended Learning Outcomes)*

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Develop simple programs that demonstrate the use of fundamental programming concepts such as input/outputs, operations, conditions, and iteration.	8.1.4, 8.2.4, 8.5.3
2. Demonstrate an understanding of the basic principles and best practice in software development.	8.2.2
3. Express algorithmic solutions to problems according to a specification.	8.2.1, 8.2.3, 8.5.3
4. Apply suitable program testing and debugging strategies.	8.1.4, 8.2.4, 8.5.3

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-23	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1 & 2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be published on the website as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Naomi Johns-Dyer	<b>OTHER MODULE STAFF:</b> John Glazebrook, Mark Williams
<b>SUMMARY OF MODULE CONTENT:</b>  Introduction to creating solutions in code to a given problem using a range of programming fundamentals such as input/output, conditions, operations, iteration. Methods of testing and debugging code. Using pseudocode and flowcharts to express algorithms. Coding best practice and standard convention. Introduction to the differences between interpreted, intermediate and compiled languages.	

<b>SUMMARY OF TEACHING AND LEARNING</b> <i>(Refer to HESA KIS definitions)</i>		
<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	25	
Practical classes and workshops	20	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 - Developing programs to solve problems. (ALO 1, 3, 4)	100%
Practical	P1 – Best Practice and Convention Portfolio (ALO 2)	100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 - Developing programs to solve problems. (ALO 1, 3, 4) New Piece	100%
Coursework (in lieu of the original assessment)	P1 – Best Practice and Convention (ALO 2) New Piece	100%

<b>To be completed when presented for Minor Change approval and/or annually updated</b>	
<b>Updated by:</b>	<b>Approved by:</b> Date:



## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR1295      **MODULE TITLE:** Systems Analysis and Design  
**CREDITS:** 20      **FHEQ LEVEL:** 4      **HECoS CODE:** 100753 systems analysis and design  
**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes  
**SHORT MODULE DESCRIPTOR:** (max 425 characters)

This module covers the use of UML and OO techniques for systems analysis and design. Learners will use a “Systems thinking” approach to design, and will use critical thinking and analysis to evaluate existing systems and recommend design approaches to create improved systems.

ELEMENTS OF ASSESSMENT – see <a href="#">Definitions of Elements and Components of Assessment</a>					
<b>C1</b> (Coursework)	100%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- Gain an understanding of Systems analysis and design principles
- Use a “Systems Thinking” approach to designing software
- Apply UML techniques to system designs
- Understand the object-oriented systems theory.

**ASSESSED LEARNING OUTCOMES:** (refer to Programme Specification for relevant Programme Intended Learning Outcomes)

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Demonstrate an understanding of various approaches to systems analysis and design.	8.1.2, 8.3.2
2. Use appropriate methods and techniques to produce analysis and designs for a given scenario.	8.1.3, 8.4.2, 8.5.3, 8.5.4
3. Evaluate the systems analysis tools and techniques that could be used in different scenario's.	8.5.3
4. Identify appropriate use cases, as well as strengths and weaknesses of different methodologies.	8.1.2, 8.2.3

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-23	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be used in the UNISTATS return and published on the extranet as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Mark Williams	<b>OTHER MODULE STAFF:</b> Naomi Johns-Dyer, John Glazebrook
<b>SUMMARY OF MODULE CONTENT:</b> This module introduces: <ul style="list-style-type: none"><li>• The roles and responsibilities within the software development lifecycle and how teams work effectively to produce software.</li><li>• UML</li><li>• The object-oriented design processes</li><li>• Requirements specifications</li><li>• The roles and responsibilities of the project life cycle within your organisation.</li><li>• How best to communicate in a team using various communication methods and how to adapt appropriately to different audiences.</li><li>• The similarities and differences and appropriate use cases for different software development methodologies.</li></ul>	

<b>SUMMARY OF TEACHING AND LEARNING</b> <i>(Refer to HESA KIS definitions)</i>		
<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	25	
Practical classes and workshops	20	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

<b>SUMMATIVE ASSESSMENT</b>		
<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 - The Systems analysis and design approach (ALO 1, 3)	50%
	C2 – Using systems analysis and design methods (ALO 2, 4)	50%
		100%

<b>REFERRAL ASSESSMENT</b>		
<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Systems analysis and Design in Practice (ALO 1, 2, 3, 4) New Piece	100%

<b>To be completed when presented for Minor Change approval and/or annually updated</b>	
<b>Updated by:</b> Date:	<b>Approved by:</b> Date:

## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR1299      **MODULE TITLE:** Behavioural Analytics and Data Security  
**CREDITS:** 20      **FHEQ LEVEL:** 4      **HECoS CODE:** 100963 knowledge and information systems  
**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes  
**SHORT MODULE DESCRIPTOR:** (max 425 characters)

This module introduces students to the concept of behavioural analytics. The students investigate both through theory and practical activity the actions of people and how (BA) is used to identify opportunities for both positive and negative areas of computing, the investigation will see students profiling users and network activity and identify areas for security optimisation in relation to the CIA triad.

#### ELEMENTS OF ASSESSMENT – see [Definitions of Elements and Components of Assessment](#)

<b>C1</b> (Coursework)	70%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	30%
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- To develop an understanding of the basic principles of Human Behavioural Analytics
- To develop analytical skills in relation to identifying trends and synthesising of data.
- Apply Behavioural Analytic Data to establish patterns and identify risks in Data Security.

**ASSESSED LEARNING OUTCOMES:** (refer to Programme Specification for relevant Programme Intended Learning Outcomes)

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Evaluate the use of Behavioural Analytics within the cyber security industry.	8.1.1, 8.1.2, 8.1.5 8.2.2,
2. Analyse and compare data to identify trends in computer and network operations	8.1.2
3. Demonstrate and apply understanding of Data Analysis and comment upon findings to identify risks to Data and Information Security.	8.1.1, 8.1.2, 8.3.1, 8.5.3

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-23	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be used in the UNISTATS return and published on the extranet as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Naomi Johns-Dyer	<b>OTHER MODULE STAFF:</b> Dave Cook

### **SUMMARY OF MODULE CONTENT:**

This module introduces students to the concepts of behavioural analytics. The students investigate both through theory and practical activity the actions of people and how (BA) is used to identify opportunities for both positive and negative areas of computing. The investigation will see students profiling users and attacks, and understanding how “traffic pattern analysis” affects data security analysing data from current trends and network activity and identify areas for security optimisation in relation to the CIA triad.

### **SUMMARY OF TEACHING AND LEARNING** *(Refer to HESA KIS definitions)*

<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	15	
Practical classes and workshops	30	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Data Analytics – (ALO 1)	100%
Practical	P1 – CIA Risks Presentation – (ALO 2, 3)	100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Data Analytics – (ALO 1) New Piece	100%
Practical	P1 – CIA Risks Presentation (ALO 2, 3) New Piece	100%

### **To be completed when presented for Minor Change approval and/or annually updated**

<b>Updated by:</b> Date:	<b>Approved by:</b> Date:
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# LEVEL 5 MODULE RECORDS

## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR2298      **MODULE TITLE:** Agile Project Management  
**CREDITS:** 20      **FHEQ LEVEL:** 5      **HECoS CODE:** 100812 project management  
**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes  
**SHORT MODULE DESCRIPTOR:** *(max 425 characters)*

The Agile project methodology is widely used in the Software Development industry, this module introduces the core concepts and practices of Agile development, including the key Agile frameworks and principles of the Agile manifesto.

ELEMENTS OF ASSESSMENT – see <a href="#">Definitions of Elements and Components of Assessment</a>					
<b>C1</b> (Coursework)		<b>E1</b> (Examination)		<b>P1</b> (Practical)	100%
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- Review the use of Agile within the Software Development Industry.
- Understand the principles of the Agile Manifesto.
- Develop and understanding of the key Frameworks within Agile.
- Apply Agile principles to practical projects.

**ASSESSED LEARNING OUTCOMES:** *(refer to Programme Specification for relevant Programme Intended Learning Outcomes)*

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Demonstrate an understanding of the key principles of Agile project management and appropriate use cases.	8.3.2, 8.4.4
2. Undertake project planning activities using an Agile approach.	8.2.3, 8.3.1, 8.3.3, 8.4.4, 8.5.2, 8.5.4,
3. Apply an appropriate Agile Framework to a practical project.	8.1.3, 8.2.3, 8.3.3, 8.4.4, 8.5.3
4. Evaluate the use of Agile methods.	8.1.3, 8.5.3

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-24	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1 & 2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be published on the website as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Naomi Johns-Dyer	<b>OTHER MODULE STAFF:</b> Mark Williams
<b>SUMMARY OF MODULE CONTENT:</b>  Introduction to Agile project management and the core concepts of Agile using the Agile manifesto.  Overview of the key Agile frameworks including SCRUM and KANBAN, DSDM. How to apply the Agile methodology to practical projects. Agile practices such as pair and mob programming. The roles and responsibilities within the Agile team.	

<b>SUMMARY OF TEACHING AND LEARNING</b> <i>(Refer to HESA KIS definitions)</i>		
<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	25	
Practical classes and workshops	20	
Employer led activity	5	Industry specialist delivery
Guided Independent Study	150	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Practical	P1 – The Agile Method (ALO 1,2	50%
	P1 – Portfolio of a live project (ALO 3, 4)	50%
		100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Practical	P1 – The Agile Method (ALO 1,2 New Piece	100%
	P1 – Portfolio of a live project (ALO 3, 4) New Piece	

<b>To be completed when presented for Minor Change approval and/or annually updated</b>	
<b>Updated by:</b> Date:	<b>Approved by:</b> Date:

## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR2299      **MODULE TITLE:** Data Structures and Algorithms

**CREDITS:** 20      **FHEQ LEVEL:** 5      **HECoS CODE:** 100751 information modelling; 100956 programming

**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes

**SHORT MODULE DESCRIPTOR:** *(max 425 characters)*

This module covers the use of algorithms and data structures for application in programming-based activity. The module will equip learners with the necessary skills to apply complex algorithms and data structures in their regular practice as a Software Engineer.

#### ELEMENTS OF ASSESSMENT – see [Definitions of Elements and Components of Assessment](#)

<b>C1</b> (Coursework)	100%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- Design complex algorithms to solve problems.
- Create code based on algorithmic design.
- Understand the types of data structures and their use cases.
- Design, develop and test data the use of data structures.
- Understand the need for a structured approach in the design of effective software

**ASSESSED LEARNING OUTCOMES:** *(refer to Programme Specification for relevant Programme Intended Learning Outcomes)*

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Develop pseudocode to solve a problem.	8.1.2, 8.1.4, 8.2.2
2. Implement algorithms in code.	8.1.4, 8.2.2, 8.5.3
3. Design and develop an appropriate data structure for a given scenario.	8.1.2, 8.2.2, 8.5.4
4. Test and evaluate the use of a data structure based on technical requirements.	8.2.2, 8.5.4

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-24	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1 & 2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:



## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be published on the website as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> John Glazebrook	<b>OTHER MODULE STAFF:</b> Naomi Johns-Dyer
<b>SUMMARY OF MODULE CONTENT:</b>  Data types, operators and expressions. Methods, classes and inheritance. Flowcharts and Pseudo-code conventions. Tree algorithms and graphs, linear data structure, lists, dictionaries and sorting. Data manipulation, iterative and recursive algorithms.	

<b>SUMMARY OF TEACHING AND LEARNING</b> ( <i>Refer to HESA KIS definitions</i> )		
<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	30	
Practical classes and workshops	15	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Developing Algorithms (ALO 1, 2)	50%
	C2 – Using Data Structures (ALO 2, 3,4)	50%
		100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Using Data Structures and Algorithms (ALO 1, 2, 3,4) New Piece	100%

<b>To be completed when presented for Minor Change approval and/or annually updated</b>	
<b>Updated by:</b> Naomi Johns-Dyer <b>Date:</b> Jan-23	<b>Approved by:</b> <b>Date:</b>

## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR2300      **MODULE TITLE:** System Development Project

**CREDITS:** 20      **FHEQ LEVEL:** 5      **HECoS CODE:** 100376 computer and information security, 100812 project management

**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes

**SHORT MODULE DESCRIPTOR:** *(max 425 characters)*

This module aims to teach methods of planning, implementation and managing a project as it progresses through its life cycle. This is a group based project, allowing student groups to follow their own professional projects interests after being approved for suitability of project by the course team.

#### ELEMENTS OF ASSESSMENT – see [Definitions of Elements and Components of Assessment](#)

<b>C1</b> (Coursework)	70%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	30%
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- To introduce the tools and techniques for the design, implementation and management of a medium sized project through viable methodology.
- Develop understanding of various project management strategies and tools.

**ASSESSED LEARNING OUTCOMES:** *(refer to Programme Specification for relevant Programme Intended Learning Outcomes)*

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Demonstrate analytical understanding of the principles and practices of project management.	8.3.2, 8.2.3
2. Apply knowledge and understanding of project management.	8.5.4
3. Evaluate project management practices, analyse design, plan and implement solutions to defined problems.	8.2.1, 8.4.1, 8.5.1
4. Evaluate the issues of working in a project group.	8.3.3, 8.4.3

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-24	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1 & 2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be used in the UNISTATS return and published on the extranet as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Naomi Johns-Dyer	<b>OTHER MODULE STAFF:</b> Clint Washington, John Glazebrook, Dave Cook

### **SUMMARY OF MODULE CONTENT:**

The module provides students the opportunity to explore techniques used in the management of professional projects. Traditional and agile methodologies are introduced giving students the opportunities to compare and evaluate them. The group project will provide both context in-which students can develop technical and democratic processes, analytical and reasoning skills alongside experiencing their chosen project strategy. Learners will design, code and test a practical project using appropriate coding languages.

### **SUMMARY OF TEACHING AND LEARNING** *(Refer to HESA KIS definitions)*

<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	20	
Project Supervision	25	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Project Report (ALO 1, 2, 3)	100%
Practical	P1 - Project Presentation (ALO 4)	100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Project Report (ALO 1, 2, 3) New Piece	100%
Practical	P1 - Project Presentation (ALO 4) New Piece	100%

### **To be completed when presented for Minor Change approval and/or annually updated**

<b>Updated by:</b> Date:	<b>Approved by:</b> Date:
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## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR2301      **MODULE TITLE:** Work Placement and Current Issues  
**CREDITS:** 20      **FHEQ LEVEL:** 5      **HECoS CODE:** 100376 computer and information security  
**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes  
**SHORT MODULE DESCRIPTOR:** (max 425 characters)

This module provides students with experience, knowledge and understanding of the working environment and current issues facing today's IT professional. It will provide practical knowledge of working practices, ethical, social responsibilities, processes and legal aspects associated with an IT professional.

ELEMENTS OF ASSESSMENT – see <a href="#">Definitions of Elements and Components of Assessment</a>					
<b>C1</b> (Coursework)	70%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	30%
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)			

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- To develop knowledge and understanding of the working environment of an IT professional.
- To develop analytical skills and evaluate IT professionals working practices, responsibilities and socio-ethical aspects of working IT professional.
- To gain practical skills by undertaking a meaningful (computing) work placement.

**ASSESSED LEARNING OUTCOMES:** (refer to Programme Specification for relevant Programme Intended Learning Outcomes)

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Demonstrate analytical knowledge of working practices of IT professional through work placement.	8.1.5, 8.2.1, 8.3.3, 8.4.1
2. Analyse and evaluate the role and function of legislation, codes of conduct, and codes of ethics within the IT profession.	8.3.2, 8.4.2
3. Report upon the working of, legal and social responsibilities of an IT professional in practice	8.4.2, 8.5.4

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-24	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1 & 2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be used in the UNISTATS return and published on the extranet as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Naomi Johns	<b>OTHER MODULE STAFF:</b> Dave Cook

### **SUMMARY OF MODULE CONTENT:**

This module provides students with IT working experience, gaining practical knowledge and understanding of the modern IT working environment, including current issues facing today's IT professional. The module also explores through both working practice and theory social, ethical and legal responsibilities of the IT practitioner the practical element through the form of work placements. Through work based learning, learners will apply in the workplace a range of knowledge and skills learnt throughout the programme

### **SUMMARY OF TEACHING AND LEARNING** *(Refer to HESA KIS definitions)*

<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	15	
Seminars	15	
Work Based Learning	30	Suggestion of approximately 30 hours of work-based learning, learners should complete sufficient hours to meet AMLO 1.
Guided Independent Study	140	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Current Issues – (ALO 1, 2)	100%
Practical	P1 – Work Placement Portfolio (ALO 3)	100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Current Issues – (ALO 1, 2) New Piece	100%
Practical	P1 – Work Placement Portfolio (ALO 3) New Piece	100%

### **To be completed when presented for Minor Change approval and/or annually updated**

<b>Updated by:</b> Date:	<b>Approved by:</b> Date:
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## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR2302      **MODULE TITLE:** Network Security and Design  
**CREDITS:** 20      **FHEQ LEVEL:** 5      **HECoS CODE:** 100365 computer networks  
**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes  
**SHORT MODULE DESCRIPTOR:** (max 425 characters)

This module introduces students to the planning, design and implementation of modern secure computer networks including investigation into the detection, prevention and reporting of various security threats faced by modern industry.

ELEMENTS OF ASSESSMENT – see <a href="#">Definitions of Elements and Components of Assessment</a>					
<b>C1</b> (Coursework)	50%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)	50%		

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

**MODULE AIMS:**

- To develop the knowledge and practical skills required for the planning, design, configuration and implementation of secure data networks.
- To develop an understanding of the common methods of securing networked systems, the understanding of log files and analysis of corresponding data.
- Develop a knowledge of how to mitigate various data network threats from a theoretical and practical understanding

**ASSESSED LEARNING OUTCOMES:** (refer to Programme Specification for relevant Programme Intended Learning Outcomes)

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Demonstrate knowledge and report upon the planning, design, configuration and implementation of secure networks.	8.2.3, 8.4.1
2. Critically evaluate the appropriate tools and methodology for securing networked systems	8.4.1, 8.5.2
3. Evaluate the potential threats to networks, track, log and report upon networked activity.	8.4.1, 8.5.2

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-24	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> 1
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:

## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

Items in this section must be considered annually and amended as appropriate, in conjunction with the Module Review Process. Some parts of this page may be used in the UNISTATS return and published on the extranet as a guide for prospective students. Further details for current students should be provided in module guidance notes.

<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Dave Cook	<b>OTHER MODULE STAFF:</b> Clint Washington

### **SUMMARY OF MODULE CONTENT:**

This module introduces students to the planning, design, and implementation of secure modern computer networks. Including; investigation into the detection, prevention and reporting of various security threats faced by modern business and industry. Opportunities to develop practical skills in using detection tools, auditing and penetration tools and analysing findings and providing counter measures are to be used to support the theoretical parts of the module.

### **SUMMARY OF TEACHING AND LEARNING** *(Refer to HESA KIS definitions)*

<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	20	
Practical classes and workshops	25	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Securing Networks – (ALO 2, 3)	100%
Online Open Book Assessment	O1 – Network Security – (ALO 1)	100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Securing Networks – (ALO 2, 3) New Piece	100%
Online Open Book Assessment	O1 – Network Security – (ALO 1) New Piece	100%

### **To be completed when presented for Minor Change approval and/or annually updated**

<b>Updated by:</b> Date:	<b>Approved by:</b> Date:
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## UNIVERSITY OF PLYMOUTH MODULE RECORD

### SECTION A: DEFINITIVE MODULE RECORD

**MODULE CODE:** TRUR2303      **MODULE TITLE:** Digital Forensics  
**CREDITS:** 20      **FHEQ LEVEL:** 5      **HECoS CODE:** 100376 computer and information security  
**PRE-REQUISITES:** None      **CO-REQUISITES:** None      **COMPENSATABLE:** Yes  
**SHORT MODULE DESCRIPTOR:** (max 425 characters)

This module introduces students to the detection, diagnosis, prevention and reporting of attacks on computer systems and networks. Students will have the opportunity to undertake Digital Forensics Investigation

ELEMENTS OF ASSESSMENT – see <a href="#">Definitions of Elements and Components of Assessment</a>					
<b>C1</b> (Coursework)	50%	<b>E1</b> (Examination)		<b>P1</b> (Practical)	
<b>T1</b> (In-Class Test)		<b>O1</b> (online open book assessment)	50%		

**SUBJECT ASSESSMENT PANEL to which module should be linked:** Computing

**Professional body minimum pass mark requirement:** N/A

#### MODULE AIMS:

- To develop a knowledge of how to use diagnostic tools in a range of situations to assess the potential threats to computer systems.
- To develop an understanding of how to counter attacks from both a theoretical and practical aspect.
- To develop an understanding of the concepts and principles of a Cyber Crime Investigation.

**ASSESSED LEARNING OUTCOMES:** (refer to Programme Specification for relevant Programme Intended Learning Outcomes)

At the end of the module the learner will be expected to be able to:

Assessed Module Learning Outcomes:	Programme Intended Learning Outcomes (PILOs) contributed to:
1. Investigate and evaluate the appropriate tool(s) for diagnosing problems in a range of different computer systems.	8.5.2
2. Apply understanding of potential threats to track, log and report user activity on a computer system.	8.2.1, 8.2.3 8.2.4, 8.5.3
3. Apply and evaluate the principles of a cybercrime investigation.	8.4.2, 8.5.1, 8.5.2

<b>DATE OF APPROVAL:</b> May-23	<b>FACULTY/OFFICE:</b> Partnerships
<b>DATE OF IMPLEMENTATION:</b> Sep-24	<b>SCHOOL/PARTNER:</b> Truro and Penwith College
<b>DATE(S) OF APPROVED CHANGE:</b>	<b>SEMESTER:</b> Semester 2
<b>MODE OF DELIVERY:</b> Campus Taught	

Notes:



## **SECTION B: DETAILS OF TEACHING, LEARNING AND ASSESSMENT**

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<b>ACADEMIC YEAR:</b> 2024-25	<b>NATIONAL COST CENTRE:</b> 121
<b>MODULE LEADER:</b> Dave Cook	<b>OTHER MODULE STAFF:</b> Clint Washington

### **SUMMARY OF MODULE CONTENT:**

This module introduces students to the detection, diagnosis, prevention and reporting of attacks on computer systems and networks. Students will have the opportunity to undertake Digital Forensics Investigation.

### **SUMMARY OF TEACHING AND LEARNING** *(Refer to HESA KIS definitions)*

<b>Scheduled Activities</b>	<b>Hours</b>	<b>Comments/Additional Information</b> (briefly explain activities, including formative assessment opportunities)
Lecture	15	
Practical classes and workshops	30	
Guided Independent Study	155	
<b>Total</b>	<b>200</b>	(NB: 1 credit = 10 hours of learning; 10 credits = 100 hours, etc.)

### **SUMMATIVE ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Forensic investigation – (ALO 1, 2,3)	100%
Online Open Book Assessment	O1 – Digital Forensics – (ALO 1, 2, 3)	100%

### **REFERRAL ASSESSMENT**

<b>Element Category</b>	<b>Component Name</b>	<b>Component Weighting</b>
Coursework	C1 – Forensic investigation (ALO 1, 2,3) New Piece	100%
Online Open Book Assessment	O1 – Digital Forensics – (ALO 1, 2, 3) New Piece	100%

### **To be completed when presented for Minor Change approval and/or annually updated**

<b>Updated by:</b> Date:	<b>Approved by:</b> Date:
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