SECTION 1: KEY PROGRAMME DETAILS

PART A: PROGRAMME INFORMATION	
Highest Award	BSc (Hons) Computer Science
Interim Award	BSc Computing
Interim Award	DipHE Computing
Interim Award	CertHE Computing

Awarding Institution	Taylors University, UWE Bristol
Teaching Institution	Taylors University Taylors University
Delivery Location	Taylors University
Study Abroad / Exchange / Credit Recognition	Placement ✓ Sandwich Year X Credit Recognition X Year Abroad X
Faculty Responsible For Programme	Faculty of Environment & Technology
Department Responsible For Programme	FET Dept of Computer Sci & Creative Tech
Professional Statutory or Regulatory Body (PSRB) Links	Malaysian Quality Assurance (MQA)
Apprenticeships	
Mode of Delivery	Full-time

ENTRY REQUIREMENTS	UCAS Tariff Points: For the current entry requirements see the UWE public website. At TU: A Levels : CDD or 14 points (A=10, B=8, C=6, D=4, E=2)

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	STPM : B- C+ C+ or CGPA of 2.44 and above CPU : 66% Average (6 subjects) SAM : TER 60 UEC : Aggregate 18 points (6 subjects) TBF : Successful Completion (50%) IB : 24 points (6 Subjects) ADP : 30 Credit Units (minimum CGPA 2.0) English Language requirement: IELTS : 6.0 overall TOEFL : 213 or better [Computer Based] : 550 or better [Paper Based] A Levels : Successful Completion CPU : 60% in English [4C, 3U or 4U] SAM : Successful Completion TBF : Successful Completion UEC : English B4 or better MUET : Band 4 Others : Successful completion of Pre-University or Diploma which medium of instruction is solely English
For Implementation From	1 Aug 2018
ISIS Code/s	Programme Code I102-AUG-FT-TU-G401 Other codes: JACS Computer science HECoS 100000: Undefined UCAS SLC

SECTION 2: PROGRAMME OVERVIEW, AIMS and LEARNING OUTCOMES

PART A: PROGRAMME OVERVIEW, AIMS and LEARNING OUTCOMES

1. (Programme) Overview (c. 400 words)

Graduates in the field of Computing/Computer Science would be expected to have an excellent understanding of the internal operation of computers and operating and file systems and a working knowledge of relevant theories and paradigms of computing. They would be able to use appropriate analysis, design and programming tools, languages and methods to develop efficient solutions to computing problems.

2. Educational Aims (c. 4-6 aims)

(NB Computing/Computer Science refers to the dual award comprising BSc (Hons) Computing at UWE and Bachelor of Computer Science (Honours) at Taylor's University (TU))

BSc (Hons) Computing/Computer Science has the following general aims:

To prepare students for entry into the Computer Science profession and the more general challenges of professional and personal life.

To inculcate in students problem-solving and other transferable skills that will be valuable to them in any

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PART A: PROGRAMME OVERVIEW, AIMS and LEARNING OUTCOMES

career.

To prepare students for progression to higher degrees in Computing and in particular Software Engineering.

To continue the development of those general study skills that will enable students to become independent, lifelong learners.

BSc Computing/Computer Science has the following specific aims:

To impart technical skills including requirements analysis, system specification and design (including human-computer interface and database design), programming, and testing.

To impart those skills which will enable a student to manage a software development project; these include: quality management as well as planning, estimating, project monitoring and control.

To encourage students to uphold professional, ethical and social standards and to keep up to date with recent technological and theoretical developments.

To provide exposure to the body of research that underlies the use of computers and to develop familiarity with some major themes within Computer Science.

To develop the students' understanding of the importance of solving complex ill-defined problems in any domain, though with particular reference to the development of software.

3. Programme and Stage Learning Outcomes (c. 6-8 outcomes)

Programme (Learning) Outcomes (POs)

Knowledge and Understanding

A1	Object-oriented programming language concepts; other programming paradigms; syntax and semantics; top-down development; programming to satisfy designs.
A2	Program design concepts, methods, and notations; object-oriented design and other design paradigms; algorithms; design patterns.
A3	Object-oriented and related databases logical and physical database design; database query languages.
A4	The concepts underpinning distributed systems and networks.
A5	The concepts underpinning World-Wide Web technology and web-based application development.
A6	Electronic commerce; architectures and components of commercial applications based upon www technology; technical and management issues.
A7	The concepts underlying the reuse of components and framework in software development; related research issues.
A8	The architecture and main components of computers.
A9	The concepts underpinning user interfaces; good design practice; notation issues; user interface evaluation.

Intellectual Skills

B1	Critical Thinking
B2	Analysis
B3	Synthesis of different types of information

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PART A: PROGRAMME OVERVIEW, AIMS and LEARNING OUTCOMES

B4	Evaluation
B5	Problem Solving
B6	Appreciate problem contexts
B7	Balance conflicting objective
B8	Construction of logical arguments
B9	Discussion and debate about technical subjects with peers

Subject/Professional Practice Skills

C1	Write programs that conform to requirements and designs
C2	Create high-level and low-level designs that correspond to stated requirements
C3	Design databases to meet application requirements
C4	Create user interfaces for a variety of applications.
C5	Perform adequate tests on programs
C6	Know how to use existing components and frameworks to build new applications
C7	Build web-based programs
C8	Employ a range of tools and notations to support the activities listed above: e.g. editors, compilers, design workbenches, HTML, CGI, Java etc..

Transferable Skills and other attributes

D1	Communication skills: to communicate orally or in writing.
D2	Self-management skills: to manage one's own time; to meet deadlines; t work with others
D3	IT skills in context: to use software tools in the context of application development
D4	Logical reasoning skills: To undertake analysis and interpretation of information in the context of the Computing discipline
D5	Problem formulation: To express problems in appropriate notations
D6	Progression to independent learning: To gain experience of, and to develop skills in, learning independently of structured class work. For example, to develop the ability to use on-line facilities to further self-study
D7	Comprehension of professional literature: to read and to use literature sources appropriate to the discipline to support learning activities.

PART B: Programme Structure

1. Structure

Year 1

Year 1 Compulsory Modules

Code	Module Title	Credit	Type
UFCFGS-15-1	Artificial Intelligence I 2020-21	15	Compulsory
UFCFDS-15-1	Computer Systems Architecture 2020-21	15	Compulsory

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UFCFFS-30-1	Foundations of Computing 2020-21	30	Compulsory
UFCFHS-30-1	Principles of Programming 2020-21	30	Compulsory
UFCFES-30-1	Web Development and Databases 2020-21	30	Compulsory

Year 2

Year 2 Compulsory Modules

Code	Module Title	Credit	Type
UFCFK4-30-2	C++ Development 2021-22	30	Compulsory
UFCFQ4-30-2	Computer Networks and Operating Systems 2021-22	30	Compulsory
UFCFV4-30-2	Data, Schemas and Applications 2021-22	30	Compulsory
UFCFK6-30-2	Software Engineering 2021-22	30	Compulsory

Year 3

Year 3 Compulsory Modules

Code	Module Title	Credit	Type
UFCFU3-15-3	Advanced Databases 2022-23	15	Compulsory
UFCFY3-15-3	BioComputation 2022-23	15	Compulsory
UFCFR4-45-3	Computing Project 2022-23	45	Compulsory
UFCFB5-15-3	Ethical and Professional Issues in Computing and Digital Media 2022-23	15	Compulsory
UFCFM6-15-3	Requirements Engineering 2022-23	15	Compulsory

Year 3 Optional Modules
UWE home students can take 15 credits from:

UFCFP5-15-3
Integrated Case Studies

UFCF95-15-3
Entrepreneurial Skills

UFCFT4-15-3
Cryptography

TU transfer students can take 15 credits from:

UFCF95-15-3
Entrepreneurial Skills

UFCFT4-15-3
Cryptography

Code	Module Title	Credit	Type
UFCFT4-15-3	Cryptography 2022-23	15	Optional
UFCF95-15-3	Entrepreneurial Skills 2022-23	15	Optional
UFCFP5-15-3	Integrated Case Studies 2022-23	15	Optional

PART C: Higher Education Achievement Record (HEAR) Synopsis

Graduates in the field of Computing/Computer Science would be expected to have an excellent understanding of the internal operation of computers and operating and file systems and a working knowledge of relevant theories and paradigms of computing. They would be able to use appropriate analysis, design and programming tools, languages and methods to develop efficient solutions to computing problems.

PART D: EXTERNAL REFERENCE POINTS AND BENCHMARKS

Reference points/benchmarks (UWE)

The QAA Computing benchmark statements

The QAA Subject Benchmark Statement for Computing was published in 2007, and is applicable to this proposal. The design team has considered it in drawing up the structure of the programme, and is of the view that the proposal falls clearly within the scope of the benchmarks, as regards curriculum, teaching and learning, and the benchmarking standards themselves.

The benchmarks (paragraph 2.1) identify a range of types of degrees in computing. At one extreme is a programme that "covers a wide range of topics spanning the entire area of computing". At the other, programmes that "take one very specific aspect of computing and covers it in great depth". This

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PART D: EXTERNAL REFERENCE POINTS AND BENCHMARKS

programme resides in the middle of these two extremes providing relatively detailed coverage of a moderately broad subset of computing topics and embraces the three key ideas:

Development of computing systems;

Importance of specialism and position within a broader context;

Balance between theory and practice.

The benchmarks establish a set of Principles of Course Design (paragraph 3.1). This programme, whilst first developed prior to the writing of the benchmarks, nevertheless satisfies these design principles and continues to be revised bearing them in mind.

The benchmarks also contain (section 5) statements of the standards expected of graduates at both modal and threshold levels. The team is of the view that graduates of the programme will be able to meet the required standards, and indeed have done so on earlier versions of the programme.

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of individual modules are to be found in the module specifications.

Reference points/benchmarks (TU)

Three key influences have informed the design of the international awards within the TU:
TU's mission and purpose statements
Statutory Requirements
International Standards

TU's mission and purpose statements

The TU's 10-year mission is to be a university of 20,000 students, renowned for its teaching excellence and the distinctive qualities of its graduates.

The TU's purpose is to educate the youth of the world to take their productive place as leaders in the global community.

The concrete indicators in TU's Mission Statement are substantiated by two existing Taylor's policies:
Taylor's Graduate Capabilities
This policy substantiates the following clause in our Mission Statement:
"….. the distinctive qualities of its graduates"
Taylor's University Teaching and Learning Framework
This policy substantiates the following clause in our Mission Statement
"…. Renowned for its teaching excellence"

The diagram In Appendix 1 illustrates how the Taylor's Graduate Capabilities and Teaching and Learning Framework both support our Mission Statement, which in turn supports our Purpose. All academic and research policies and procedures at Taylor's are to be in accordance with the focus provided by these policies.

Purpose
Mission
Graduate Capabilities Teaching and Learning Framework

Taylor's Graduate Capabilities

PART D: EXTERNAL REFERENCE POINTS AND BENCHMARKS

The teaching and learning approach at Taylor's University is focused on developing the Taylor's Graduate Capabilities in its students, capabilities that encompass the knowledge, cognitive capabilities and soft skills of our graduates.

A Taylor's graduate has proven ability and is capable in the following areas

Discipline-specific knowledge
Sound understanding of foundational concepts and theories in subject area
Cognitive capabilities
Foundation and skills for lifelong learning
Learns autonomously
Able to acquire and manage information'
Ability to comprehend a wide variety of literature
Awareness of contemporary global issues
Problem solving skills
Defines issues of problems well
Analyses problems comprehensively
Allies knowledge effectively and applies theory to practice
Able to arrive at workable and effective solutions
Soft Skills
Communication skills:
Ability to speak and write well
Able to organize, synthesize and present information effectively
Interpersonal skills
Understands team dynamics, power of teams and team work
Works with others in a team
Able to assume leadership in small and/or big groups
Intrapersonal skills
Ability to manage time effectively
Understands the role of personal image and professionalism at work
Works independently in context of tasks to be completed
Cosmopolitan thinking and intercultural competence
Forms opinions and articulates views from a global perspective
Awareness of and sensitivity to cross-cultural differences
Technology savvy
Executive keyboarding
Effective use of ICT and related technologies

The learning environment at Taylor's is further geared towards nurturing the Taylor's Core Values; the personal attributes of excellence, integrity, passion for work, interpersonal respect and care, openness in communication and a healthy balance between professional and personal life.

Through participation in various optional electives, including co-curricular activities, Taylor's students may also develop additional knowledge, cognitive capabilities and soft skills other than those listed. These, as well as the Taylor's graduate capabilities above, are recorded by students in the form of individual student portfolios and verified by Taylor's University against the set of expectations for each subject, program and co-curricular activity.

Statutory Requirements:

Degree qualifications offered by Malaysian private higher education institutions are required by the government to comply with the internationally benchmarked points of reference below, for the purpose of quality control. Summaries of each of the instruments' relevant requirements, contextualized for TU, are given in the Appendices to this document.

Malaysian Qualifications Framework, MQF.
Code of Practice for Programme Accreditation, COPPA.

PART D: EXTERNAL REFERENCE POINTS AND BENCHMARKS

Code of Practice for Institutional Audit, COPIA.
Requirements of Professional Bodies, where applicable.

International Standards:

For the purpose of international benchmarking, we integrate best practices in quality assurance in higher education from the regions from which Taylor's partner universities are drawn.

To implement the policy of compliance with the benchmark documents identified in this section, collating the information from all sources the scope of the TQM is categorized into 10 distinctive areas.

Scope: Identified from

Overview and goals: MQF, COPPA, European Standard
Curriculum: MQF, COPPA, COPIA, professional bodies requirements; European, Australian and US Standards
Intake: COPPA
Assessment: COPPA, European and Australian Standards
Faculty: COPPA, European, Australian and US Standards
Resources: COPPA, European, Australian and US Standards
Review: COPPA, COPIA, European, Australian and US Standards
Public Transparency: European Standard
External QA mechanisms: COPPA, COPIA, professional bodies requirements; European, Australian and US Standards
Improved mechanisms: COPPA, professional bodies requirements; European, Australian and US Standards

Appendices:

Appendix No: Appendix Title
1 Summary of MQF requirements contextualized for TQM
2 Summary of COPPA requirements contextualized for TQM
3 Summary of COPIA requirements contextualized for TQM
4 Regulated professions in Malaysia

PART E: REGULATIONS

Approved to University Regulations and Procedures.

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