**Programme Specification**

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| **Please note:** 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 passes the programme. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the programme handbook. The accuracy of the information contained in this specification is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education. |

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| **Degree and Programme Title**  **Joint Honours Programmes in Computing** |

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| 1. **Awarding Institution/Body**
 | University of Kent |
| 1. **Teaching Institution**
 | University of Kent  |
| 1. **School responsible for management of the programme**
 | School of Computing |
| 1. **Teaching Site**
 | Canterbury and Medway |
| 1. **Mode of Delivery**
 | Full-time |
| 1. **Programme accredited by**
 | None |
| 1. **Final Award**
 | BSc (Hons), or BA (Hons) depending on the discipline |
| 1. **Programme**
 | CanterburyWG64 Computing and Film StudiesRG14 Computing and FrenchRG24 Computing and GermanVG14 Computing and HistoryRG34 Computing and ItalianVG54 Computing and PhilosophyGR44 Computing and Hispanic StudiesMedwayComputing combined with another discipline (3 year)Computing with a Year in Industry combined with another discipline (4 year)Programme title would be “ …. and Computing”, or “…. and Computing with a Year in Industry” |
| 1. **UCAS Code (or other code)**
 | See above |
| 1. **Credits/ECTS Value**
 | 3 Year: 360 credits (180 ECTS credits)4 Year: 480 credits (240 ECTS credits) |
| 1. **Study Level**
 | Undergraduate |
| 1. **Relevant QAA subject benchmarking group(s)**
 | Computing 2007 |
| 1. **Date of creation/revision** *(note that dates are necessary for version control)*
 | April 2016  |
| 1. **Intended Start Date of Delivery of this Programme**
 | From September 2016 |

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| 1. **Educational Aims of the Programme**

The programme aims to: |
| * To provide a programme which will attract and meet the needs of those contemplating a career involving a significant element of computing and those motivated by intellectual interest in applying computing to other disciplines.
* To provide a sound knowledge and systematic understanding of the principles and practices of computing.
* To provide generally applicable skills which will be of lasting value in a constantly changing field.
* To offer a range of modules covering the foundations of computing.
* To offer a range of options to enable students to study selected areas of computing in depth.
* To provide teaching which is informed by current research and scholarship in computing and which requires students to engage with aspects of work at the frontiers of knowledge.
* To develop general critical, analytical and problem solving skills which can be applied in a wide range of different computing and non-computing settings.
* To prepare students for employment or further study in computing, particularly in conjunction with another discipline
* To provide learning opportunities that are enjoyable experiences, involve realistic workloads, based within a research-led framework and offer appropriate support for students from a diverse range of backgrounds
* To provide high quality teaching in supportive environments with appropriately qualified and trained staff.
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| **16 Programme Outcomes**The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas. The programme outcomes have references to the subject benchmarking statements for Computing 2007 **(CO-SB)** |

**A. Knowledge and Understanding of:**

1. Hardware: the major functional components of a computer system. **(CO-SB 3.2)**
2. Software: programming languages and practice; tools and packages; computer applications; structuring of data and information. **(CO-SB 3.2)**
3. Communications and interaction: basic computer communication network concepts; communication between computers and people; the control and operation of computers. **(CO-SB 3.2)**
4. Practice: problem identification and analysis; design development, testing and evaluation. **(CO-SB 3.2)**

Outcomes specific to: Year in Industry programmes (Medway programmes only)

1. Aspects of the core subject areas from the perspective of a commercial or industrial organisation

**Teaching/learning and assessment methods and strategies used to enable outcomes to be achieved and demonstrated**

Acquisition is through lectures, supported in most modules by supervised classes and laboratory work. Self-directed learning is facilitated by study guides and web-based material.

Assessment is through a combination of unseen written examinations, assessed coursework and both individual and group project work. Coursework consists of both written reports and practical assignments.

**Skills and Other Attributes**

**B. Intellectual Skills:**

1. Modelling: knowledge and understanding in the modelling and design of computer-based systems in a way that demonstrates comprehension of the trade-off involved in design choices. **CO-SB 3.2**
2. Reflection and communication: present succinctly to a range of audiences rational and reasoned arguments. **CO-SB 3.2**
3. Requirements: identify and analyse criteria and specifications appropriate to specific problems and plan strategies for their solution. **CO-SB 3.2**
4. Criteria evaluation and testing: analyse the extent to which a computer-based system meets the criteria defined for its current use and future development. **CO-SB 3.2**
5. Methods and tools: deploy appropriate theory, practices and tools for the specification, design, implementation, and evaluation of computer-based systems. **CO-SB 3.2**
6. Professional responsibility: Recognise and be guided by the professional, economic, social, environmental, moral and ethical issues involved in the sustainable exploitation of computer technology. **CO-SB 3.2**
7. Computational thinking: demonstrate a basic analytical ability and its relevance to everyday life. **CO-SB 3.2**

Outcomes specific to Year in Industry programmes

1. Apply some of the intellectual skills specified for the programme from the perspective of a commercial or industrial organisation.

**Teaching/learning and assessment methods and strategies used to enable outcomes to be achieved and demonstrated**

Acquisition is through lectures, supported in most modules by supervised classes and laboratory work. Self-directed learning is facilitated by study guides and web-based material.

Assessment is through a combination of unseen written examinations, assessed coursework and both individual and group project work. Coursework consists of both written reports and practical assignments

**C. Subject-specific Skills:**

1. Design and implementation: specify, design and implement computer-based systems. **CO-SB 3.2**
2. Evaluation: evaluate systems in terms of general quality attributes and possible trade-offs presented within the given problem. **CO-SB 3.2**
3. Information management: apply the principles of effective information management, information organisation, and information retrieval skills to information of various kinds.
4. Tools: deploy effectively the tools used for the construction and documentation of software, with particular emphasis on understanding the whole process involved in using computers to solve practical problems. **CO-SB 3.2**

Outcomes specific to Year in Industry programmes

1. Apply some of the subject-specific skills specified for the programme from the perspective of a commercial or industrial organisation

**Teaching/learning and assessment methods and strategies used to enable outcomes to be achieved and demonstrated**

Acquisition is through lectures, supported in most modules by supervised classes and laboratory work. Self-directed learning is facilitated by study guides and web-based material.

Assessment is through a combination of unseen written examinations, assessed coursework and both individual and group project work. Coursework consists of both written reports and practical assignments.

**D. Transferable Skills:**

Canterbury pathway only

1. Teamwork: Be able to work effectively as a member of a development team. (**CO-SB** 3.3)

Canterbury and Medway pathways:

1. Communication: make succinct presentations to a range of audiences about technical problems and their solutions. (**CO-SB** 3.2)
2. Information Technology: effective information-retrieval skills (including the use of browsers, search engines and catalogues). Effective use of general IT facilities. (**CO-SB** 3.3)
3. Self management: managing one’s own learning and development including time management and organisational skills. (**CO-SB** 3.3)

**Teaching/learning and assessment methods and strategies used to enable outcomes to be achieved and demonstrated**

### Teaching/Learning

General IT facilities are used throughout the programme for the preparation of written work. Browsers, search engines and catalogues are used for research and self-study material. All students have the opportunity to work within teams and make presentations of their work to both their peers and academic staff.

These skills are not formally assessed in themselves although all have an impact on the assessment of coursework and projects.

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| For more information on the skills developed by individual modules and on the specific learning outcomes associated with any Certificate, Diploma or BA/BSc non-honours awards relating to this programme of study, see the module mapping.*The module mapping is best presented as a table and should be attached to the programme specification. A example template is available.* |

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| **17 Programme Structures and Requirements, Levels, Modules, Credits and Awards**This programme is studied over three years full-time or, where a placement is taken, over four years full-time.The three year programme is divided into three stages, each stage comprising modules to a total of 120 credits, of which students take 60 credits of Computing modules. The four-year programme is divided into four stages. Stage S (taken between Stages 2 and 3) comprises a placement year of 120 computing credits. Students must successfully complete each module in order to be awarded the specified number of credits for that module. One credit corresponds to approximately ten hours of 'learning time' (including all classes and all private study and research). Thus obtaining 120 credits in an academic year requires 1,200 hours of overall learning time. For further information on modules and credits refer to the Credit Framework at <http://www.kent.ac.uk/teaching/qa/credit-framework/creditinfo.html> Each module and programme is designed to be at a specific level. For the descriptors of each of these levels, refer to Annex 2 of the Credit Framework at <http://www.kent.ac.uk/teaching/qa/credit-framework/creditinfoannex2.html>. To be eligible for the award of an honours degree students must obtain 360 credits, at least 210 of which must be at Level 5 or above, including at least 90 credits at level 6 or above at Stage 3.Students successfully completing Stage 1 of the programme and meeting credit framework requirements who do not successfully complete Stage 2 will be eligible for the award of a Certificate. Students successfully completing Stage 1 and Stage 2 of the programme and meeting Credit Framework requirements who do not successfully complete Stage 3 will be eligible for the award of the Diploma. Students successfully completing Stage 2 of the programme and achieving 300 credits overall including at least 60 credits at level 6 or above in Stage 3 and meeting Credit Framework requirements will be eligible for the award of a BA/BSc non-honours degree.In addition, for four year programmes that include a year abroad or a placement yearStudents successfully completing Stage 2 and also the placement and meeting credit framework requirements will be eligible for the award of the Diploma with a Year in Industry For further information refer to the Credit Framework at <https://www.kent.ac.uk/teaching/qa/credit-framework/creditinfo.html#fallbackawards>. Compulsory modules are core to the programme and must be taken by all students studying the programme. Optional modules provide a choice of subject areas, from which students will select a stated number of modules. Where a student fails a module(s) due to illness or other mitigating circumstances, such failure may be condoned, subject to the requirements of the Credit Framework and provided that the student has achieved the **programme** learning outcomes. For further information refer to the Credit Framework at <http://www.kent.ac.uk/teaching/qa/credit-framework/creditinfo.html>. Where a student fails a module(s), but has marks for such modules within 10 percentage points of the pass mark, the Board of Examiners may nevertheless award the credits for the module(s), subject to the requirements of the Credit Framework and provided that the student has achieved the **programme** learning outcomes. For further information refer to the Credit Framework. Credit by compensation or condonement will not be awarded for CO600 Group Project, CO620 Research Project, or CO790 Placement year. |

**Programme pathway: Canterbury programmes**

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| **Code** | **Title** | **Level** | **Credits** | **Term(s)** |
| **Stage 1** |
| **Compulsory Modules** |
| CO320 | Introduction to Object-Oriented Programming | 4 | 15 | 1 |
| CO324 | Computer Systems | 4 | 15 | 1 |
| CO323 | Databases and the Web | 4 | 15 | 2 |
| CO520 | Further Object-Oriented Programming | 5 | 15 | 2 |
| **Plus 60 credits from the other discipline** |
| **Stage 2** |
| **Compulsory Modules** |
| CO510 | Software Engineering | 5 | 30 | 1&2 |
| **Optional Modules** |
| 30 credits from the following |
| CO328 | Human Computer Interaction | 4 | 15 | 1 |
| CO518 | Algorithms Correctness and Efficiency | 5 | 15 | 1 |
| CO539 | Web Development | 5 | 15 | 1 |
| CO527 | Operating Systems and Architecture | 5 | 15 | 2 |
| CO528 | Introduction to Intelligent Systems | 5 | 15 | 2 |
| CO532 | Database Systems | 5 | 15 | 2 |
| **Plus 60 credits from the other discipline** |
| **Stage S for Year in Industry programme** |
| **Compulsory Modules** |
| CO790 | Sandwich Year Placement | 5 | 120 | all year |
| **Stage 3** |
| **Compulsory Modules** |
| CO600 | Group Project | 6 | 30 | 1&2 |
| or |  |  |  |  |
| CO620 | Research Project | 6 | 30 | 1&2 |
| **Optional Modules** **30 credits from the following** |
| CO636 | Cognitive Neural Networks | 6 | 15 | 1 |
| CO637 | Natural Computation | 6 | 15 | 1 |
| CO657 | Internet of Things | 6 | 15 | 1 |
| CO641 | Computer Graphics and Animation | 6 | 15 | 2 |
| CO643 | Computing Law & Professional Responsibility | 6 | 15 | 2 |
| CO646 | Computing in the Classroom | 6 | 15 | 2 |
| CO659 | Computational Creativity | 6 | 15 | 2 |
|  | Other Computing Modules as available | 6 | 15 |  |
| **Plus 60 credits from the other discipline at least 30 of which must be Level 6** |

**Programme pathway: Medway programmes**

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| **Code** | **Title** | **Level** | **Credits** | **Term(s)** |
| **Stage 1** |
| **Compulsory Modules** |
| CO320 | Introduction to Object-Oriented Programming | 4 | 15 | 1 |
| CO322 | Foundations of Computing | 4 | 15 | 1 |
| CO323 | Databases and the Web | 4 | 15 | 2 |
| CO520 | Further Object-Oriented Programming | 5 | 15 | 2 |
| **Plus 60 credits from the other discipline** |
| **Stage 2** |
| **Compulsory Modules** |
| CO324 | Computer Systems | 4 | 15 | 1 |
| CO547 | Agile Software Development | 5 | 15 | 1 |
| CO532 | Database Systems | 5 | 15 | 2 |
| CO329 | Computing Applications | 4 | 15 | 2 |
| **Plus 60 credits from the other discipline (of which 45 credits must be at Level 5 if Stage 1 modules from the other discipline are all Level 4)** |
| **Stage S for Year in Industry programme** |
| **Compulsory Modules** |
| CO790 | Sandwich Year Placement | 5 | 120 | all year |
| **Stage 3** |
| **Compulsory Modules****Students may take a 30 credit Level 6 project module from the other discipline in place of CO600** |
| CO600 | Group Project | 6 | 30 | 1&2 |
| **Optional Modules** **If CO600 is selected from the above, 30 credits must be selected from the following****If another project module is taken, 60 credits must be selected from the following which can include CO600** |
| CO539 | Web development | 5 | 15 | 1 |
| CO600 | Group Project (if not taken above) | 6 | 15 | 1&2 |
| CO634 | Computer Security and Cryptography | 6 | 15 | 1 |
| CO649 | Data Mining | 6 | 15 | 1 |
| CO639 | Electronic Commerce | 6 | 15 | 2 |
| CO643 | Computing Law & Professional Responsibility | 6 | 15 | 2 |
| CO644 | Semantic Web | 6 | 15 | 2 |
|  | Other Computing Modules as available | 6 | 15 |  |
| **Plus 60 credits from the other discipline at least 30 of which must be Level 6** |

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| **18 Work-Based Learning**Disability Statement: Where disabled students are due to undertake a work placement as part of this programme of study, a representative of the University will meet with the work placement provider in advance to ensure the provision of anticipatory and reasonable adjustments in line with legal requirements. |
| Where relevant to the programme of study, provide details of any work-based learning element, inclusive of employer details, delivery, assessment and support for students: |
| The Computing Placement Year (CO790) provides opportunity for students to work for a year as an assessed part of the degree. It is taken between the second and final year of study.Students spend the academic year working in an industrial or commercial setting, applying and enhancing the skills and techniques they have developed and studied in the earlier stages of their degree programme. Placements must be approved by the School Placement co-ordinators who have industrial links with hundreds of companies from numerous industries, both in the UK and overseas in areas such as, for example, Banks, Phamaceutical, Entertainment, Technology, Defence, Consulting.The onus is on the student to secure a placement but the School has a Placement Office with two Placement co-ordinators dedicated to supporting students both in their search for a placement (writing applications, preparation for interviews, etc.) and during the placement year.In a student’s Stage 2 the School runs a series of presentations where companies will provide overviews of the different placement schemes on offer.Whilst on placement each student has a supervisor who is an employee of the company at which the placement is being undertaken. During the placement year ongoing support is provided by the Placements Team, a member of whom will normally visit the workplace at least once during the placement to check that the student is integrating successfully and that the type of work being undertaken is appropriate. For students located overseas, the visit may be replaced by a formal telephone/Skype meeting. There will normally be two visits or telephone/Skype meetings. Each year, at the end of the Spring Term, the School organises a Campus Day for students who are part-way through their placement. Students return to the University and use the day to share their experiences of working in industry and also to receive information on their final year to prepare themselves for their return to University at the end of their placement.The placement year contributes 10% to a student’s overall degree classification. This comprises two different areas of assessment: Industrial Placement Report: reflective report by the student Industrial Placement Experience: Portfolio and logbook, and performance evaluation by the industrial supervisor. |

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| **19 Support for Students and their Learning** |
| * School and University induction programme
* Programme/module handbooks
* Library services, see <http://www.kent.ac.uk/library/>
* Student Support <http://www.kent.ac.uk/studentsupport/>
* Student Wellbeing [www.kent.ac.uk/studentwellbeing/](http://www.kent.ac.uk/studentwellbeing/)
* Centre for English and World Languages, see <http://www.kent.ac.uk/cewl/index.html>
* Student Learning Advisory Service, see <http://www.kent.ac.uk/uelt/about/slas.html>
* PASS system, see <https://www.kent.ac.uk/uelt/quality/code2001/annexg.html>
* Academic Adviser system
* Kent Union, see [www.kentunion.co.uk/](http://www.kentunion.co.uk/)
* Careers and Employability Services, see [www.kent.ac.uk/ces/](http://www.kent.ac.uk/ces/)
* Counselling Service [www.kent.ac.uk/counselling/](http://www.kent.ac.uk/counselling/)
* Information Services (computing and library services), see [www.kent.ac.uk/is/](http://www.kent.ac.uk/is/)
* Undergraduate student representation at School, Faculty and Institutional levels
* International Development Office, see [www.kent.ac.uk/international/](http://www.kent.ac.uk/international/)
* Medical Centre, see [www.kent.ac.uk/counselling/menu/Medical-Centre.html](http://www.kent.ac.uk/counselling/menu/Medical-Centre.html)
* Student Data System & Moodle VLE
* Introductory talks at the start of each teaching term of Stages 2 and 3
* Handbook for all Stages
* An extensive School website containing
* information on the programmes delivered;
* past examination papers
* staff/student liaison information including
* details of student representatives
* minutes of meetings

Industrial placement support via an Industrial Placement co-ordinator (for students taking the Computing placement.) |

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| **20 Entry Profile**The minimum age to study a degree programme at the university is normally at least 17 years old by 20 September in the year the programme begins. There is no upper age limit. |
| 20.1 **Entry Route**For fuller information, please refer to the University prospectus |
| For all joint programmes in Computing, students are admitted by the other joint School. For details of entry routes, see the appropriate programme specification issued by that School.For students who are not native speakers of English the standard IELTS requirements will apply. |
| 20.2 **What does this programme have to offer?** |
| * High quality teaching based that was rated “Excellent” after a visit by independent assessors from the Higher Education Funding Council
* Teaching that is informed by research activity, using research-led teaching whenever possible
* The development of a broad range of skills that are highly sought after by employers and which open up a wide range of careers to graduates, within Computing and other professional fields.
* Programming, modelling and design skills you can use throughout a career in Computing
* Coverage of software engineering principles which underlie large scale programme construction
* Strong links with Industry that are maintained through an ‘Industrial Panel’ and which result in industrial placements and joint research projects.

An optional year in industry that provides valuable experience |
| 20.3 **Personal Profile** |
| Desirable qualities include:* an enthusiasm about computing and related subjects
* a willingness to accept new ideas and be flexible in your thinking
* a willingness to work with others
* good oral and written communication skills
* an interest in developing a career in a computing related area
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| 21 **Methods for Evaluating and Enhancing the Quality and Standards of Teaching and Learning** |
| 21.1 **Mechanisms for review and evaluation of teaching, learning, assessment, the curriculum and outcome standards** |
| * Student module evaluations
* Annual programme and module monitoring reports, see <http://www.kent.ac.uk/teaching/qa/codes/taught/annexe.html>
* External Examiners system, see <http://www.kent.ac.uk/teaching/qa/codes/taught/annexk.html>
* Periodic programme review, see <http://www.kent.ac.uk/teaching/qa/codes/taught/annexf.html>
* Annual staff appraisal
* Peer observation
* Quality Assurance Framework, see <http://www.kent.ac.uk/teaching/qa/codes/index.html>
* QAA Higher Education Review, see <http://www.qaa.ac.uk/InstitutionReports/types-of-review/higher-education-review/Pages/default.aspx>
* Student evaluation of individual modules taught
* Active staff development programme
* Continuous monitoring of student progress and attendance
* Vetting process of examination questions by module team, and external examiners
* Departmental staff acting as external examiners at other institutions
* Double marking and/or moderation of examinations and some assessed work
* Industrial links
* Evaluation of graduate destination statistics
* School Director of Learning and Teaching
* Module teams
* Programme Teams
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| 21.2 **Committees with responsibility for monitoring and evaluating quality and standards** |
| * School of Computing Staff/Student Liaison Committees
* School Learning and Teaching Committee
* School of Computing Board of Examiners
* Faculty and University Learning and Teaching Committees
* Faculty Board
* Programme Approval sub-committee of the University Learning and Teaching Board
 |
| 21.3 **Mechanisms for gaining student feedback on the quality of teaching and their learning experience** |
| * Student module evaluations
* Staff-Student Liaison Committee
* Student rep system (School, Faculty and Institutional level)
* Annual NSS
* Annual University Internal Student Surveys
* Online forum for each Stage
 |
| 21.4 **Staff Development priorities include:** |
| * PGCHE requirements
* HEA (associate) fellowship membership
* Annual appraisals
* Institutional Level Staff Development Programme
* Academic Practice Provision (PGCHE, ATAP and other development opportunities)
* Professional body membership and requirements
* Programme team meetings
* Research seminars
* Conferences
* Study leave
* Staff members have an individual allocation of funds which they may use to develop any of their interests, including those of teaching and learning
* Staff training of various kinds including appraiser training, interview training, meeting skills etc.
* Participation in staff development week
* Research group support for research-led teaching
* Research seminars
* Annual away-days that cover a number of staff-related issues
* Module team meetings
* Regular formal and informal collaboration in programme development
* Attendance at relevant industry/business conferences/seminars
* Conference attendance (with or without departmental funding)
* Minimum expected qualifications for appointments to lecturing posts
* Minimum expected research record for appointments to lecturing posts
* Membership of relevant professional/academic bodies
* Widening participation
* Health and safety
* Participation on learning and teaching innovatory projects
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| 22 **Indicators of Quality and Standards** |
| * Results of periodic programme review March 2012
* QAA Higher Education Review 2015
* Annual External Examiner reports
* Annual programme and module monitoring reports
* Degree results and graduate recruitment statistics
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| 22.1 **The following reference points were used in creating these specifications:** |
| * QAA UK Quality Code for Higher Education
* QAA Benchmarking statement/s for Computing (2016)
* School and Faculty plan
* University Plan/Learning and Teaching Strategy
* Staff research activities
* Association of Computing Machinery, Computing Curricula 2001
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**Programme Title: Computing Joint Honours - Canterbury**

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|  | **Stage 1** | **Stage 2** | **Stage 3** |
|  | CO320 | CO324 | CO323 | CO520 |  |  |  |  | CO510 | CO328 | CO518 | CO527 | CO528 | CO532 | CO539 | CO790 (Stage S) | CO600 | CO620 | CO636 | CO637 | CO641 | CO643 | CO646 | CO657 | CO659 |
| **Programme Learning outcomes****Knowledge and Understanding:** |
| A1 |   | x |   |   |  |  |  |  |  |  |   | x |  |  |  |  | o | o |  |   |  x |   |  | x |  |
| A2 | x | x | x | x |  |  |  |  | x |  | x | x | x | x | x |  | x | x |  x | x | x |   |  | x | x |
| A3 |   | x |   |   |  |  |  |  | x | x |  |  | x |  | x |  | o | o |  |  |  x | x |  | x | x |
| A4 | x |   | x | x |  |  |  |  | x | x | x |  | x | x | x |  | x | x |  x | x | x | x |  | x |  |
| A5 |   |   |   |   |  |  |  |  |   |   |   |   |  |  |  | x | o | o |   |  |   |   |  |  |  |
| **Intellectual Skills:** |
| B1 | x |   | x | x |  |  |  |  | x | x | x |  | x | x | x |  | x | x |  x | x | x | x |  | x |  |
| B2 |   |   |   |   |  |  |  |  | x |  |  |  |  | x |  |  | x | x |  x |  |  |   | x | x | x |
| B3 |   |   |   |   |  |  |  |  | x | x | x |  |  | x | x |  | x | x |  |  |  |   |  | x | x |
| B4 |   |   | x |   |  |  |  |  | x |  | x |  | x |  | x |  | x | x |  |  |  | x |  | x | x |
| B5 |   |   |   | x |  |  |  |  | x |  |  | x |  |  | x |  | x | x |  |  | x  | x |  |  | x |
| B6 | x |   | x | x |  |  |  |  | x | x |  |  |  |  |  |  | x | x |  |  |  | x |  | x |  |
| B7 | x |  |   | x |  |  |  |  |  |  | x |  | x |  |  |  | o | o |   | x | x |   |  |  | x |
| B8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | x | o | o |  |  |  | x |  |  |  |
| **Subject-specific Skills:** |
| C1 | x |   | x | x |  |  |  |  | x | x | x | x | x | x | x |  | x | x | x |  x | x |   |  | x | x |
| C2 | x |   | x | x |  |  |  |  | x | x | x | x |  | x | x |  | x | x |  |  x |  |   |  | x | x |
| C3 |   |   | x |  |   |  |  |  | x | x |  |  |  | x | x |  | x | x |   |  |  |   |  | x |  |
| C4 | x |   | x |  |   |  |  |  | x | x |   | x |  |  | x |  | x | x |   |  | x |   |  | x | x |
| C5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | x | o | o |  |  |  |  |  |  |  |
| **Transferable Skills:** |
| D1 |  |  |  |  |  |  |  |  | x | x |  |  |  |  |  | x | x |  |  |  |  |  | x |  |  |
| D2 |   | x |   |  |   |  |  |  | x |  |  | x | x | x |  | x | x | x |  x |  | x | x | x | x | x |
| D3 | x | x | x |  |   |  |  |  | x | x |  | x | x | x | x | x | x | x |  x | x | x |   | x | x | x |
| D4 | x |   | x |  |   |  |  |  | x |   | x | x | x | x | x | x | x | x |  x | x | x |   | x | x | x |

**Programme Title: Computing Joint Honours - Medway**

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| --- | --- | --- | --- |
|  | **Stage 1** | **Stage 2** | **Stage 3** |
|  | CO320 | CO322 | CO323 | CO520 |  |  |  |  | CO324 | CO547 | CO532 | CO329 |  |  |  | CO790 (Stage S) | CO600 | CO539 | CO634 | CO649 | CO639 | CO643 | CO644 |  |
| **Programme Learning outcomes****Knowledge and Understanding:** |
| A1 |   |  |   |   |  |  |  |  | x | x |   |  |  |  |  |  | o |   | x |   |   |   |  |  |
| A2 | x |  | x | x |  |  |  |  | x | x | x | x |  |  |  |  | x | x | x | x | x |   | x |  |
| A3 |   |  |   |   |  |  |  |  | x | x |   |  |  |  |  |  | o | x | x |   |   | x |  |  |
| A4 | x |   | x | x |  |  |  |  |   | x | x | x |  |  |  |  | x | x |   | x |   | x |  |  |
| A5 |   |   |   |   |  |  |  |  |   |   |   |   |  |  |  | x | o |   |   |   |   |   |  |  |
| **Intellectual Skills:** |
| B1 | x |   | x | x |  |  |  |  |  | x | x |  |  |  |  |  | x | x |   | x | x | x |  |  |
| B2 |   |   |   |   |  |  |  |  |  | x | x | x |  |  |  |  | x |   |   |   | x |   |  |  |
| B3 |   |   |   |   |  |  |  |  |  | x | x | x |  |  |  |  | x | x | x | x | x |   | x |  |
| B4 |   |   | x |   |  |  |  |  |  | x |   | x |  |  |  |  | x | x | x |   | x | x |  |  |
| B5 |   |   |   | x |  |  |  |  |  | x |   |  |  |  |  |  | x | x | x | x | x | x | x |  |
| B6 | x |   | x | x |  |  |  |  |  | x |   |  |  |  |  |  | x |   | x | x | x | x | x |  |
| B7 | x | x  |   | x |  |  |  |  |  |   |   | x |  |  |  |  | o |   |   | x | x |   |  |  |
| B8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | x | o |  |  |  |  | x |  |  |
| **Subject-specific Skills:** |
| C1 | x |   | x | x |  |  |  |  |  |   | x | x |  |  |  |  | x | x | x |   | x |   |  |  |
| C2 | x |   | x | x |  |  |  |  |  | x | x |  |  |  |  |  | x | x | x | x | x |   | x |  |
| C3 |   |   | x |  |   |  |  |  |  | x | x | x |  |  |  |  | x | x |   | x | x |   | x |  |
| C4 | x |   | x |  |   |  |  |  |  | x |   | x |  |  |  |  | x | x |   | x | x |   |  |  |
| C5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | x | o |  |  |  |  |  |  |  |
| **Transferable Skills:** |
| D2 |   |  |   |  |   |  |  |  | x | x | x |  |  |  |  | x | x |   |   | x | x | x | x |  |
| D3 | x |  | x |  |   |  |  |  | x | x | x | x |  |  |  | x | x | x | x | x | x |   | x |  |
| D4 | x |  x | x |  |   |  |  |  |  |   | x | x |  |  |  | x | x | x | x | x | x |   | x |  |