

Course Information Form (CIF)

The CIF provides core information to students, staff teams and others on a particular course of study.

Section 1 - General Course Information	
Course Title	Information Systems Information Systems (with Professional Practice Year)
Qualification	BSc (Hons)
Intermediate Qualification(s)	
Awarding Institution	University of Bedfordshire
Location of Delivery	AA – University Square Campus
Mode(s) of Study and Duration	Full-time over 3 years Full-time with Professional Practice Year over 4 years Part-time pathway typically over 6 years
Core Teaching Pattern	Core Pattern One and two Core Pattern One for with Professional Practice Year
FHEQ Level	Level 6
Professional, Statutory or Regulatory Body (PSRB) accreditation or endorsement	n/a
PSRB Renewal Date	n/a
University of Bedfordshire Employability accreditation	to be confirmed
Route Code (SITS)	BSISD-S+BSISPAAF
Subject Community	Computer Science and Information Systems
UCAS Course Code	G500
Relevant External Benchmarking	QAA Subject Benchmark Statement Computing. QAA FHEQ level descriptors.

Section 2 - Published Information

Material in this section will be used on the course web site to promote the course to potential students. The text should be written with this potential audience in mind.

Course Structure

The Units which make up the course are:

Unit Code	Level	Credits	Unit Name	Core or option
CIS020-1	4	30	Introduction to Software Development	Core
CIS016-1	4	30	Principles of Programming	Core
CIS017-1	4	30	Computer Systems Structure	Core
CIS018-1	4	30	Fundamentals of Computer Studies	Core
CIS010-2	5	30	Mobile Applications	Core
CIS018-2	5	30	Computer Security and Operating Systems	Core
CIS007-2	5	30	Decision Support Systems and Data Mining	Core
CIS020-2	5	30	Systems Development and Modern Database Practices	Core
CISpy-2	5	0	Professional Practice	Option
CIS013-3	6	30	Research Methodologies and Emerging Technologies	Core
CIS004-3	6	30	Advanced IT Strategies and Paradigms	Core
CIS015-3	6	30	Social and Professional Project Management	Core
CIS017-3	6	30	Undergraduate Project	Core

Why study this course

- Broadly based yet enough depth to give you credible vocational skills
- Coverage of a variety of areas in Computer Science typically delivered by an expert in this area
- Because of the wide range of courses taught in the department a number of special equipment is accessible in areas such as biometrics, robotics or computer graphics, which allows the Computer Scientist to encounter the context of use of various concepts in Computer Science.

Course Summary – Educational Aims

This course responds to the growing market demand for graduates who aim to deal with the information and organisation needs of businesses. As a student, you will gain understanding of information and organisation structures in a business, as well as skills of exploiting existing software that is required for designing and developing information systems. You will also obtain skills and ability to interact with business analysts, computer programmers, software engineers and computer scientists.

Entry requirements

Standard entry requirements for UK students, students from the European Union and international students.

- Standard entry requirements for UK students – <http://www.beds.ac.uk/howtoapply/ukugentryregs>
- Students from the European Union - <http://www.beds.ac.uk/howtoapply/eu/guides>
- International students - <http://www.beds.ac.uk/howtoapply/international>

PSRB details

BCS re-accreditation in progress.

Graduate Impact Statements

The course has been designed to develop graduates who are able to:

- Exhibit an advanced understanding of methods, concepts and technologies within the core area of Information Systems such as Data Base Management, Security, Software Development, Project Management, and Data Mining.
- Contribute specialist expertise productively to a multi-specialist development team working from software design to implementation and deployment.

- Learn and use new ideas and techniques as they appear within an evolving industry.

Higher Education Achievement Report - Additional Information

This course is central to the portfolio of courses within the Department of Computer Science and Technologies. Students have the opportunity to expand their knowledge by interaction with their peers in cognate courses that specialise in areas such as Information Systems, Data Mining, and Security. The Department creates numerous interfaces where this interaction can happen.

Learning and Teaching

The overall teaching and learning methodology comprises a solid theoretical exposition accompanied by tutor supported practical activity. This is accomplished by a combination of lectures, tutorials, moderated e-conference discussion and support, and directed practical activity in a suite of dedicated, modern computer laboratories. This is often in a combined lecture, demonstration, practical and assessment all in one session with academic and demonstrator support.

There is a range of self directed research and computer based practical activity which can be assisted by the use of teaching packs in various multimedia forms such as DVDs, videos and pod casts.

The particular form of support is unit specific, however, all are characterised by tutor support and practical activity.

All the teaching resources are available in a web site – a virtual learning environment that includes references and links, general unit and course information, discussion groups, tests and assessments. This VLE (Virtual Learning Environment) is available outside of the University to enrolled students.

Students entering upon the course will already have some experience of using computers and their operation. Therefore the approach to teaching and learning begins with student centred methods and progresses towards independent learning.

Our teaching is centred upon students, aiming to build their confidence by providing timely and informative feedback under the guidance of their teacher.

As students gain in knowledge and experience at level II they build upon gained skills and knowledge to study in greater depth certain core topics in programming whilst broadening their knowledge by studying from a selection of topics.

Level three enables students, via the mechanism of completion of an individual project spread over 2 semesters designed to demonstrate various in depth skills involved in software engineering project management and the production and testing of a software artefact.

Lectures, often with invited experts and industry leaders, focus on the latest developments and trends in Computing. Other units taken at both level 2 and level 3 are designed to enable students to gain vocationally valid skills and experience by engaging in business projects while gaining academic credit.

Project supervision involves regular tutorial meetings between groups/individuals and their staff supervisor. The project is seen as a guarantee of the Honours nature of students and is seen, both within the University and outside, as an indication of the overall abilities and performance of the student. It is expected that the student will demonstrate their competency over most if not the entirety of the software engineering lifecycle.

Developing your employability

Employability is understood widely as encompassing knowledge, skills and a professional attitude which your tutors expect you to display in all your units. All University of Bedfordshire courses aim to help you to be prepared for the world of work. The Careers Service is there to support you throughout the three years of your study. Our curriculum gives you skills that are valuable for a career within Computer Science but it is

also relevant for a much wider range of applications.

The final year unit 'Social and Professional Project Management' in particular requires you to work in a team so as to apply a current project management methodology that embraces all of these knowledge areas in an integrated way while going through the stages of planning, execution and project control; you will work as part of a team, take responsibility and make autonomous decisions that impact on the project team performance.

In addition and somewhat complementary the honours project fosters independent and autonomous study: you learn to take up the responsibility of conducting your project, typically derived from your own ideas, in collaboration with a dedicated member of the teaching staff as project supervisor.

Students who register for the degree with professional practice year will additionally attend a series of workshops and activities related to securing a suitable placement and compulsory briefings at the end of year 2 to ensure that all legal requirements for health and safety, safeguarding etc. training have been met. This will be explained more fully in your professional practice handbook once you have registered with the Careers and Employability Service's Student Development and Awards Team in your first year. If you will be working with children and/or vulnerable people you will be required to have a DBS check and undertake Safeguarding and Prevent training.

Department (s)

Computer Science and Technology

Assessment

You are assessed in a variety of ways. The majority of units are assessed through coursework, group and individual projects, portfolios, essays, presentations or exams. You will also produce software artefacts in the area of your specialism. Constant feedback and advice from a supervisory or unit team will be provided to support you in your work.

At level 4 you are assessed on your understanding of the fundamental concepts of Computer Science and its application. You are required to comprehend the basic range of intellectual concepts which form the foundations of the subject and application area, and will be assessed on your ability to articulate such concepts in a coherent manner, in a variety of written assessments/written briefs. For example, there will be time constraint programming assignments as well as multiple choice tests.

At level 5 you are assessed on your ability to apply the basic concepts of the disciplines introduced in level 4 to existing controversies and issues on which there is already a body of research and critical opinion. You also should be able to demonstrate the inter-relationships between critical theory and practice. For example, the units 'Concepts of AI' and 'Object Oriented Programming and Software Engineering' will further your understanding of software paradigms. Also new concepts (such as Computer Security) are introduced.

At level 6 you will be required to demonstrate independent thinking and initiative. This may be in the form of analysing and criticising current approaches and theory within software engineering and programme development. In all cases, you will be expected to show an awareness of the major theories and practices of the discipline. You will progress from well-defined briefs to more open-ended and challenging assessments, which culminate in the honours project – where you will be given freedom to choose your area of work.

After Graduation

Career:

General IT graduate trainees leading to long-term and more specialized positions ranging from business analysts, systems development to customers services and IT arrangement.

Further study:

MSc in Information Systems; MPhil / PhD.

Student Support during the course

At institutional level, the university has in place a range of easily accessible support structures for new and existing students.

The Student Information Desk (SiD, <http://beds.ac.uk/sid>) offers confidential advice on all aspects of

academic study. It provides information about other areas of university-wide student support such as extenuating circumstances, housing, health, counselling, study support, special needs and disability advice, and careers service. The Study Hub provides workshops and one to one support for academic skills.

The university chaplaincy runs regular meetings, social events and trips. The Student Union provides additional support and activities.

Course specific support is also in place. First year students receive a comprehensive induction in the week prior to the commencement of the academic year. In addition to this, course co-ordinators will meet with their student groups to explain the course structure and other issues relating to the student experience. These introductions will give you outlines of your course and units, a description of the ways you will be encouraged to develop your knowledge and skills, and signpost resources and materials to assist the process of your learning and success. An important part of this induction is the training to use BREO (Bedfordshire Resources for Education Online). BREO is your personalized virtual learning environment that contains lecture notes, links for online assignment submissions, staff contact details, links to central student services and much more. We expect that you use BREO regularly, and that you use your university email where we send you updates about all aspects of your course which need your attention.

All students will be allocated a personal tutor when they join the course. This academic will be responsible of monitoring your academic progress throughout your first year and beyond, and will help you with any academic or personal issues that might come up. The personal tutor is your consistent point of contact for support and guidance, but will on occasion refer you to other university staff for specific issues.

Further support is provided by lecturers who have office hours and by the course administration team. Students may be required, at the discretion of the course coordinator, to undergo diagnostic testing for academic English language abilities, and may further be required, at the course coordinator's discretion, to participate in academic English support workshops or classes laid on by the University.

Our PAL (Peer Assisted Learning) scheme will provide additional support to new students from students at levels 5 and 6.

Students with disabilities

This course makes intensive use of computing equipment (desktop or laptop computers) and so if you have difficulty accessing these you should discuss this with the Disability Advice Team in conjunction with the course team at the outset to ensure that appropriate support is in place.

The University of Bedfordshire is committed to ensuring that curricula across all courses are inclusive to all students. The Disability Advice Team which is associated with the Student Information Desk is available to discuss any issues students may have and can provide services such as dedicated accessibility software, sign language interpreters, note takers, dyslexia screening/tuition and support with mobility on campus. They offer confidential advice and information about academic and personal issues, adjustments in examinations, applying for the Disabled Students' Allowances (DSA) and buying suitable equipment. The Disability Advice Team communicates regularly with unit and course co-ordinators to ensure the needs of students are covered.

All students concerned that their studies may be affected by disability are encouraged to contact either their Portfolio leader, Course co-ordinator or Personal Tutor for advice at whatever point in their course the need to do so becomes apparent.

Assessment Map

Unit Code	C/O	Weeks																																
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30								
CIS020-1	C					Ex-CB									CW-ePort																			
CIS016-1	C			Ex-CB										CW-ePort																				
CIS017-1	C	PR-Lab					Ex-CB													WR-I												Ex-CB		
CIS018-1	C	WR-I																															Ex-CB	
CIS010-2	C													CW-Port																			Ex	
CIS018-2	C									Ex-PT																							EX	
CIS007-2	C									WR-Gr																							Ex-CB	
CIS020-2	C																																EX-CB	
CISpy-2	O																																	
CIS013-3	C									WR-I																								WR-Gr
CIS004-3	C																																	EX
CIS015-3	C																																	EX-CB
CIS017-3	C																																	PJ-Proj & PR-viva

Section 3 - Academic Information

This section will be used as part of the approval and review process and **peer academics** are the target audience.

Course Learning Outcomes

- LO1 Research, analyse and evaluate technologies and organisational problems in a range of contexts and to choose and implement appropriate solutions
- LO2 Demonstrate skills that allow them to conceptualise and apply formal and informal creative thinking techniques towards the development and implementation of relevant information systems into the real world
- LO3 Demonstrate skills in project management in relation to the delivery of projects within the constraints of client critical success factors
- LO4 Express, interpret and critically evaluate issues concerning the law and professional ethics in the context of information systems
- LO5 Demonstrate investigative skills in the area of information systems through completion of substantial assignments, reports, presentations and case studies
- LO6 Apply skills in a rational argument, objective interpretation of evidence, judgement and decision making towards the planning, analysis and successful development of information systems within complex organisational environments
- LO7 Understand and extend existing information systems concepts, theories and practices following professional conventions and standards
- LO8 Critically describe and evaluate future trends in information systems development
- LO9 Work effectively within a systems development team and be able to explain the conditions necessary for successful team working

In order to qualify for the award of BSc (Hons) Information Systems (with Professional Practice year) students will need to meet all of the outcomes above and:

- LO10: Demonstrate knowledge and analytical understanding of professional practice by successfully completing an approved period of approved work place practice.

Course-specific regulations

n/a

Teaching, Learning and Assessment

The course structure across levels is implemented as follows:

The first year will cover the fundamentals of the broader subject area (Computer Science) by encompassing the topics of Programming, Modelling, Software Engineering, Databases, Networking and Hardware. In addition the professional development of the students is fostered within Term 1 of the unit CIS018-1 Fundamentals of Computing.

The second year is comprised of four specialist units that deepen the knowledge, understanding and application of the first year. While there is no direct prerequisite, there is a clear logic in structure from the first year to the second year.

- CIS010-2 Mobile Applications follows the foundations provided in CIS020-1 Introduction of Software Engineering.
- CIS018-2 Computer Security and Operating Systems provides additional value to the understanding of hardware and operating systems as delivered in the second term of CIS018-1 Fundamentals of Computing.
- CIS007-2 Decision Support Systems and Data Mining specializes on ideas and algorithms taught within CIS016-1 Principles of Programming.
- CIS020-2 Systems Development and Modern Database Practices builds on the knowledge about databases as identified in CIS017-1 Computer Systems Structure.

The final year – as with any honours degree – devotes 60 credits to the honours project as part of the two

units CIS013-3 Research Methodologies and Emerging Technologies and CIS017-3 Undergraduate Project. While the undergraduate project relates to the student working as an individual the unit CIS015-3 Social and Professional Project Management addresses student interaction within a professional environment. The students have to work in a group and make decisions within professionally arranged project meetings.

In addition, the unit CIS004-3 Advanced IT Strategies and Paradigms capstones the subject focussed experience from the second year by studying advanced IT strategies and software architectures.

The majority of units are assessed through coursework, group and individual projects, portfolios, essays, presentations or exams. Software artefacts are developed. See the section for 'Assessment' in Section 2 for details.

Additional Academic Information

Peer-assisted learning (PAL)

Peer-assisted learning is provided within the first year unit CIS018-1 Fundamentals of Computer Studies. It will be aligned with the PAL arrangements used for the other undergraduate courses within Computer Science and Technology.

Initial Assessment

CIS018-1 Fundamental of Computer Studies

Improving students' learning

Several units allow students to use work and feedback from the first assessment to perform best in the second.

All units benefit from weekly practical sessions or supervisor meetings that provide a constant learner-teacher interaction process which also serves to reflect on learning styles.

The honours project includes a 'contextual report' (Assignment 1 of CIS013-3) which is formative in nature and provides an opportunity of structured feedback on the approach taken by the students for their honours project.

Academic Integrity

Academic practice is introduced in the first year as part of the unit CIS018-1 Fundamental of Computer Studies and then further applied and critically reflected upon the units in the final year, in particular the honours project and the Project Management unit (CIS015-3).

While most of the interaction in the honours project is one-to-one between student and supervisor there will be some dedicated lectures to the class on key issues such as referencing or utilizing library resources.

HEAR implementation

The Higher Education Achievement Report (HEAR) is intended as a formative document used with students during the course of their studies. Course teams have constant access to the transcript of students, results and progression through the SITS e-vision system, and in addition to this formal statistical outline of individual progress, students are encouraged to have regular meetings with their Personal Tutor to assist the reflective process in monitoring progress. Many students find it helpful to maintain a personal blog of their progress monitoring academic and skill development which can be developed within the University platforms such as BREO. Course teams thus ensure working with students to help complete the HEAR document.

Internationalisation

Teaching and learning of the courses align with the University's policies of inclusion and internationalisation. Much of the content of project management is internationalised through the use of a number of internationally recognised project management techniques. Similarly, most – if not all – of the Computing materials are non-country specific, so skills taught to the students here are international by their very nature.

Sustainability

Information Technology and hence Computer Science play a central role within sustainable development and manufacturing. Across the curriculum and in particular in the units CIS020-1 Introduction to Software Development and CIS007-2 Decision Support Systems and Data Mining algorithms are discussed that are central in developing smart technology. The final year honours project creates the opportunity to develop these ideas further.

Section 4 - Administrative Information

This section will be used as part of the approval and review process and peer academics are the target audience.

Faculty	Creative Arts, Technologies & Science
Portfolio	Undergraduate Computer Science and Technology
Department/School/Division	Computer Science and Technology
Course Coordinator	Vitaly Schetinin
Version Number	1/17
Approved by (cf Quality Handbook ch.2)	University Panel Transition Event
Date of approval (dd/mm/yyyy)	March 2015
Implementation start-date of this version (plus any identified end-date)	AY 16/17

Form completed by:

Name:Vitaly Schetinin..... Date:23th January 2014.....

Authorisation on behalf of the Faculty Teaching Quality and Standards Committee (FTQSC)

Chair: Date:

Course Updates		
Date (dd/mm/yyyy)	Nature of Update	FTQSC Minute Ref:
27/05/2016	Update of sandwich year to professional practice and adjustment to employability and learning outcomes section.	
24/2/2017	Added February start	