UNIVERSITY OF WOLVERHAMPTON

School of Mathematics and Computer Science
BSc (Hons) Computer Science at Herald College, Kathmandu, Nepal
Course Guide

2020-21
September

About this guide

This is your course guide. It provides the basic but fundamental information about your course of study. This guide is yours for the duration of the course, we don't re-issue it annually and if any information contained within were to change then we will write to you to explain so.

In particular, if any important aspects relating to your modules were to change then we will inform you in accordance with the Code of Practice for the Management of Changes to Modules and Courses. The teaching and support teams which you will get to know over time will refer to this guide – it will be useful to you and we advise you to make good use of it throughout your studies.

The Course Guide should be read in conjunction with the more general sources of information which relate to all students at the University. The Student Handbook is a very detailed reference point for all issues relating to your studies which aren't specific to just your particular course. You might also want to refer to the Student Charter; the University's Policies and Regulations and the University Assessment Handbook documents which will provide you with all of the information that we think you will need for your period of study here.

If you need additional information, or you simply want to discuss elements of any of these documents or other aspects of your course, find that there is something you need to know, please contact your Faculty Student Services:

Faculty Student Services

We can help with the administration and organisation of your time at University – from enrolment and module registration, tuition fee enquiries, attendance support, course management and lifecycle queries, extenuating circumstances, leave of absence, transfers and changes, assignment submission, SAMs appointments, assessment and result queries, right through to Graduation.

You can also come and talk to us for impartial advice and support if things are starting to go wrong and you're not sure who else to talk to. The main thing to remember is that you are not alone. We see large numbers of students over the course of a year on a variety of issues, so please don't be afraid to approach us.

We are here to ensure that your transition into Higher Education is as smooth as possible. Normal office opening hours are Monday-Friday 08:45-17:00.

You can contact us through the e:vision help desk, by phone or in person or by e-mail:

Faculty of Science and Engineering (City Campus)	Alan Turing Building MI 024	(01902) 322129	fsestudentservices@wlv.ac.uk
Faculty of Science and Engineering (Telford Campus)	The Darby Building SC 041	(01902) 322129	fsestudentservices@wlv.ac.uk
Help and Advice is also available from Student Support & Wellbeing...	Contact us at the Alan Turing Building MI 001 for all enquiries and referrals... Services operate at all campuses by appointment.	(01902) 321074 (01902) 321070	ssw@wlv.ac.uk money@wlv.ac.uk

Welcome from the Course Leader

On behalf of the teaching and support teams from BSc (Hons) Computer Science at Herald College, Kathmandu, Nepal course, I would like to extend to you a very warm welcome to the University of Wolverhampton, and in particular your campus.

My name is Jeffrey Ting and I am the course leader for your BSc (Hons) Computer Science at Herald College,

Kathmandu, Nepal course and alongside your personal tutor, will be your main point of contact over the duration of your studies. My contact details are below – please don't hesitate to get in touch if you need any support or guidance.

The successes which you will achieve whilst at the University are based upon a partnership between the expertise and support from the staff here and the effort you put into learning. We welcome students who are eager to think for themselves, to take control of their own learning and who are ready to get involved in developing the skills required in a highly competitive job market. Make the most of the wide range of opportunities available to you.

Studying at University can be difficult, and for many of you the transition into University life will be challenging. However we will support you throughout your course, particularly whilst you develop into an independent learner over the course of your first year with us.

We believe it is important that you are encouraged to make your own contribution to the effective operation and development of your chosen course. We hope that you might consider acting as a Course Representative during some of your time with us to help the University continue to improve your experience.

I would like to wish you every success with your studies. We look forward to working with you and hope that you enjoy your time with us.

Jeffrey Ting

Course Management and Staff Involvement

Please note that an up-to-date staff list for your course is available within the Student Administration Portal (e:Vision) which includes your Course Leader, Head of Department as well academic staff involved with module delivery.

Educational Aims of the Course

This course aims to produce software developers who can seamlessly make the transition from University to the international computer industry. This is achieved by providing a thorough grounding in the core principles of computer science and integrating these with computer languages, tools, techniques and methodologies used by computer professionals worldwide.

Our Computer Science course offers you the flexibility to pursue areas of particular interest to you such as web, databases, and networking. Additionally, we will prepare you with the key skills needed to keep abreast of future developments.

What makes this programme distinctive?

You will be taught by a professional team of lecturers who have significant research and industrial experience. Many of our UK Module Leaders that will be overseeing the delivery of the modules on the course are Fellows and Members o the Industry's Professional Body, the British Computer Society (BCS).

You will learn how cutting-edge technology works and how to take advantage of it. You will gain experience with latest developments like programming multicore processors, GPUs and the embedded microprocessor systems that enable mobile computing.

Course Structure

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 1

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Module	Title	Credits	Period	Type
4CS001	Introductory Programming And Problem Solving	20	OSEA	Core
4CS015	Fundamentals of Computing	20	OSEA	Core
4CS017	Internet Software Architecture	20	OSEA	Core
4MM013	Computational Mathematics	20	OSEA	Core
4CI018	Academic Skills and Team-based Learning	20	OSEA	Core
4CS016	Embedded Systems Programming	20	OSEA	Core

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 2

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Module	Title	Credits	Period	Type
5CS019	Object-Oriented Design and Programming	20	OSEAI	Core
5CS021	Numerical Methods and Concurrency	20	OSEA1	Core
5CS022	Distributed and Cloud Systems Programming	20	OSEAI	Core
5CS024	Collaborative Development	20	OSEAI	Core

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

5CI022	Databases	20	OSEAI	
5CS025	Games Development	20	OSEAI	
5CS037	Concepts and Technologies of AI	20	OSEAI	

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

5CS020	Human - Computer Interaction	20	OSEAI	
5CS036	Robotic Engineering	20	OSEAI	

September (Full-time)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 3

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Module	Title	Credits	Period	Type
6CS005	High Performance Computing	20	OSEAI	Core
6CS007	Project and Professionalism	40	OSEAY	Core
6CS030	Big Data	20	OSEAI	Core

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

6CS027	Secure Mobile Application Development	20	OSEAI
6CS013	Emerging Interactive Technologies	20	OSEAI
6CS014	Complex Systems	20	OSEAI

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

6CS012	Artificial Intelligence and Machine Learning	20	OSEAI
6CS025	Advanced Games Technologies and Programming	20	OSEAI
6CS028	Advanced Web Development	20	OSEAI

Please note: Optional modules might not run every year, the course team will decide on an annual basis which options will be running, based on student demand and academic factors, to create the best learning experience.

Course Learning Outcomes

Learning Outcome	Contributing Modules
CertHE Course Learning Outcome 1 (CHECLO1) Demonstrate knowledge of the underlying concepts and principles associated with your area(s) of study, and an ability to evaluate and interpret these within the context of that area of study.	4CI018 Academic Skills and Team-based Learning 4CS001 Introductory Programming And Problem Solving 4CS014 Team-based Learning Project 4CS015 Fundamentals of Computing 4CS016 Embedded Systems Programming 4CS017 Internet Software Architecture 4MM013 Computational Mathematics
CertHE Course Learning Outcome 2 (CHECLO2) Demonstrate an ability to present, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of your subject(s) of study.	4CI018 Academic Skills and Team-based Learning 4CS001 Introductory Programming And Problem Solving 4CS014 Team-based Learning Project 4CS015 Fundamentals of Computing 4CS017 Internet Software Architecture 4MM013 Computational Mathematics
CertHE Course Learning Outcome 3 (CHECLO3) Evaluate the appropriateness of different approaches to solving problems related to your area(s) of study and/or work.	4CI018 Academic Skills and Team-based Learning 4CS001 Introductory Programming And Problem Solving 4CS014 Team-based Learning Project 4CS015 Fundamentals of Computing 4CS017 Internet Software Architecture 4MM013 Computational Mathematics

CertHE Course Learning Outcome 4 (CHECLO4) Communicate the results of your study/work accurately and reliably, and with structured and coherent arguments.	4CI018 Academic Skills and Team-based Learning 4CS014 Team-based Learning Project 4CS015 Fundamentals of Computing 4CS016 Embedded Systems Programming 4CS017 Internet Software Architecture 4MM013 Computational Mathematics
CertHE Course Learning Outcome 5 (CHECLO5) Demonstrate the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility.	4CI018 Academic Skills and Team-based Learning 4CS001 Introductory Programming And Problem Solving 4CS014 Team-based Learning Project 4CS015 Fundamentals of Computing 4CS016 Embedded Systems Programming
DipHE Course Learning Outcome 1 (DHECLO1) Demonstrate knowledge and critical understanding of the well-established principles of your area(s) of study, and of the way in which those principles have developed with an understanding of the limits of your knowledge, and how this influences analyses and interpretations based on that knowledge.	5CI022 Databases 5CS019 Object-Oriented Design and Programming 5CS020 Human - Computer Interaction 5CS021 Numerical Methods and Concurrency 5CS022 Distributed and Cloud Systems Programming 5CS024 Collaborative Development 5CS025 Games Development 5CS036 Robotic Engineering 5CS037 Concepts and Technologies of AI 5MM006 Industrial Placement
DipHE Course Learning Outcome 2 (DHECLO2) Demonstrate the ability to apply underlying concepts and principles outside the context in which they were first studied, including, where appropriate, the application of those principles in an employment context.	5CI022 Databases 5CS019 Object-Oriented Design and Programming 5CS020 Human - Computer Interaction 5CS021 Numerical Methods and Concurrency 5CS022 Distributed and Cloud Systems Programming 5CS024 Collaborative Development 5CS025 Games Development 5CS036 Robotic Engineering 5CS037 Concepts and Technologies of AI 5MM006 Industrial Placement
DipHE Course Learning Outcome 3 (DHECLO3) Demonstrate knowledge of the main methods of enquiry in the subject(s) relevant to the named award, and ability to evaluate critically the appropriateness of different approaches to solving problems in the field of study.	5CS019 Object-Oriented Design and Programming 5CS020 Human - Computer Interaction 5CS021 Numerical Methods and Concurrency 5CS022 Distributed and Cloud Systems Programming 5CS024 Collaborative Development 5MM006 Industrial Placement
DipHE Course Learning Outcome 4 (DHECLO4) Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis	5CI022 Databases 5CS019 Object-Oriented Design and Programming 5CS021 Numerical Methods and Concurrency 5CS022 Distributed and Cloud Systems Programming 5MM006 Industrial Placement
DipHE Course Learning Outcome 5 (DHECLO5) Effectively communicate information, arguments and analysis in a variety of forms to specialist and non-specialist audiences, and deploy key techniques of the discipline effectively.	5CI022 Databases 5CS020 Human - Computer Interaction 5CS024 Collaborative Development 5CS025 Games Development 5MM006 Industrial Placement
DipHE Course Learning Outcome 6 (DHECLO6) Demonstrate the qualities and transferable skills necessary for employment, requiring the exercise of personal responsibility and decision-making and undertake further training, developing existing skills and acquire new competences that will enable them to assume significant responsibility within organisations.	5CI022 Databases 5CS019 Object-Oriented Design and Programming 5CS022 Distributed and Cloud Systems Programming 5CS024 Collaborative Development 5MM006 Industrial Placement
Ordinary Degree Course Learning Outcome 1	6CS005 High Performance Computing

(ORDCLO1) Apply appropriate theory, tools and techniques (e.g. theory and practice of programming, object-oriented design and analysis, design and construction of data systems, concurrent and distributed systems) to the analysis, design and synthesis of solutions to requirements in the domain of Computer Science.	6CS007 Project and Professionalism 6CS012 Artificial Intelligence and Machine Learning 6CS013 Emerging Interactive Technologies 6CS014 Complex Systems 6CS025 Advanced Games Technologies and Programming 6CS027 Secure Mobile Application Development 6CS028 Advanced Web Development 6CS030 Big Data
Ordinary Degree Course Learning Outcome 2 (ORDCLO2) Demonstrate mastery of the essential facts, concepts, principles, theories and practices enabling graduate employment in applications of Computer Science (e.g. Software development, media computing, systems analysis).	6CS005 High Performance Computing 6CS007 Project and Professionalism 6CS012 Artificial Intelligence and Machine Learning 6CS013 Emerging Interactive Technologies 6CS014 Complex Systems 6CS025 Advanced Games Technologies and Programming 6CS027 Secure Mobile Application Development 6CS028 Advanced Web Development 6CS030 Big Data
Ordinary Degree Course Learning Outcome 3 (ORDCLO3) Demonstrate a range of transferable skills in: problem solving; communication; project management; working individually and in teams; self-management; and the ability to gather, evaluate and reflect on information from relevant sources and synthesize new knowledge and solutions to requirements in the domain of applications of Computer Science.	6CS005 High Performance Computing 6CS007 Project and Professionalism 6CS012 Artificial Intelligence and Machine Learning 6CS013 Emerging Interactive Technologies 6CS014 Complex Systems 6CS025 Advanced Games Technologies and Programming 6CS027 Secure Mobile Application Development 6CS028 Advanced Web Development 6CS030 Big Data
Ordinary Degree Course Learning Outcome 4 (ORDCLO4) Demonstrate a range of social, legal, ethical and professional skills required for continuing professional development in the Computer Science Discipline within a world-wide context.	6CS007 Project and Professionalism
Honours Degree Course Learning Outcome 1 (DEGCLO1) Apply appropriate theory, tools and techniques (e.g. theory and practice of programming, object-oriented design and analysis, design and construction of data systems, concurrent and distributed systems) to the analysis, design and synthesis of solutions to requirements in the domain of Computer Science.	6CS005 High Performance Computing 6CS007 Project and Professionalism 6CS012 Artificial Intelligence and Machine Learning 6CS013 Emerging Interactive Technologies 6CS014 Complex Systems 6CS025 Advanced Games Technologies and Programming 6CS027 Secure Mobile Application Development 6CS028 Advanced Web Development 6CS030 Big Data
Honours Degree Course Learning Outcome 2 (DEGCLO2) Demonstrate mastery of the essential facts, concepts, principles, theories and practices enabling graduate employment in applications of Computer Science (e.g. Software development, media computing, systems analysis).	6CS005 High Performance Computing 6CS007 Project and Professionalism 6CS012 Artificial Intelligence and Machine Learning 6CS013 Emerging Interactive Technologies 6CS014 Complex Systems 6CS025 Advanced Games Technologies and Programming 6CS027 Secure Mobile Application Development 6CS028 Advanced Web Development 6CS030 Big Data
Honours Degree Course Learning Outcome 3 (DEGCLO3) Demonstrate a range of transferable skills in: problem solving; communication; project management; working individually and in teams; self-management=; and the ability to gather, evaluate and reflect on information from relevant sources and synthesize new knowledge and	6CS005 High Performance Computing 6CS007 Project and Professionalism 6CS012 Artificial Intelligence and Machine Learning 6CS013 Emerging Interactive Technologies 6CS014 Complex Systems 6CS025 Advanced Games Technologies and Programming 6CS027 Secure Mobile Application Development 6CS028 Advanced Web Development

solutions to requirements in the domain of applications of Computer Science.	6CS030 Big Data
Honours Degree Course Learning Outcome 4 (DEGCLO4) Demonstrate a range of social, legal, ethical and professional skills required for continuing professional development in the Computer Science Discipline within a world-wide context.	6CS007 Project and Professionalism

PSRB

None

Employability in the Curriculum

The course is designed by international academics in direct collaboration with industry professionals, working to provide practical skills and to develop the personal transferable skills required in the workplace. Communication skills, problem solving skills and the ability to demonstrate competency in working with other people are of paramount importance in Computer Science. These skills are specifically taught early in the course and are then applied during many of the technical modules. To help grow these skills, the course includes team based projects, embedded at all levels, that tackle real industrial problems, with real industrial clients. These allow students to apply the technical skills that they have developed at each level in as close to a real environment as possible.

Teaching, Learning and Assessment

You will engage with a range of learning activities which will include lectures, tutorials, workshops and on-line forums and in class discussions. The learning activities on your course will develop distinctive graduate attributes that will make you stand out and enhance your employability. These skills will be embedded into the curriculum throughout your course. Examples include;

Digitally Literacy: All Computer Science graduates will be users of advanced technologies. However, on your course you will develop your skills to encompass literacy more fully such as learning how to find information and how to take best advantage of digital resources and the Internet to make you effective in the Information Age.

Global Citizenship: On each level of your course you will learn about social, legal and ethical aspects of Computing, which will broaden your understanding of the way the world works and how communication and collaboration are evolving.

Knowledgeable and Enterprising: Throughout your course you will build up your professional and employability skills and learn to apply the knowledge you have acquired in an enterprising way. You will constantly nurture your own intellectual curiosity. The tools, methodologies and techniques that you will learn have been carefully selected to prepare you with the skills that employers demand and the opportunities for work based learning and placements will allow you to gain the vital experience that they often expect.

Assessment Methods:

At the University of Wolverhampton, a variety of modes of assessment will be used to support and test your learning and progress and to help you develop capabilities that are valued beyond your University studies and into your working life. Your course may include a variety of assessment activities:

Written examinations (including online examinations, open and closed book examinations and quizzes)

Coursework (for example, essays, reports, portfolios, project proposals and briefs, CVs, poster presentation)
Practical (for example, oral and video presentations, laboratory work, performances, practical skills assessment)

In the final year of your undergraduate degree, and at the end of your postgraduate degree, you are likely to be expected to write an extended piece of work or research, such as a dissertation or a practice-based piece of research.

Reference Points

UK Quality Code for Higher Education

Qualifications and Credit Frameworks

Subject Benchmark Statements

University Policies and Regulations

Equality Act (2010)

Academic Regulations Exemptions

Section 1.2.3 - Exemption for delivery outside the standard University Academic Calendar in order to align with collaborative partner timetable.

APPROVED by Chair's Action on 18/2/2019.

Support with your studies

University Learning Centres are the key source of academic information for students providing access to:

- Physical library resources (books, journal, DVDs etc.)
- Study areas to allow students to study in the environment that suits them best: Social areas, quiet and silent areas.
- A wide range of online information sources, including eBooks, e-journals and subject databases
- Academic skills support via the Skills for Learning programme
- Students on campus can attend workshops or ask for one-to-one help on a range of skills such as academic writing and referencing.
- Dedicated Subject Pages to enable you to explore key online information sources that are recommended for their studies.
- Physical access to local libraries both in UK and overseas via SCONUL and WorldCat agreements

We also strongly advise you to download to "MyWLV" student app. MyWLV is a single point of personalised access to the variety of systems the University offers. This includes pulling through relevant information (e.g. deadlines, timetables) and linking to underlying systems.

Course Specific Support

At the start of each year of your course you will be assigned a Personal Tutor from Herald College who will guide you through the induction process and provide support and academic counselling throughout the year on an appointment basis. They will be able to offer you advice and guidance to help you liaise with other staff and support facilities at Herald College and at the University of Wolverhampton. You should meet your Personal Tutor at least 3 times a year, which must include meetings that you are invited to at critical points in

your course. The Personal Tutor provides academic counselling and will be accessible throughout the week on a drop-in, or appointment basis to discuss timetables, requests for extensions, requests for extenuating circumstances, general concerns about study and student life and general programme planning.

Subject support:

Tutorials, workshops, seminars and meetings - provide the primary opportunities for students to interact with staff on topics relating to modules. All modules provide at least one of these forms of face-to-face support.

Formative feedback - tutors provide personalised written feedback on most summative assessments. The mechanism for feedback from purely formative tasks varies between assessments, but will always be provided in some form. Online formative tasks often provide feedback straight away. On occasions tutors may provide generalised verbal feedback to the whole class on points relating to an assessment

Assessment and subject-based surgeries provide additional student support for subjects that students often need extra help with. They are often concentrated around the times when assessments take place. Revision sessions are provided for many modules that have exam-like tests and enable you to interact with tutors to review parts of the course. Mock exams and tests may provide opportunities to experience an examination environment before the final summative test and give you feedback on your understanding.

Contact Hours

In higher education, the term ‘contact hours’ is used very broadly, to refer to the amount of time that you spend learning in contact with teaching or associated staff, when studying for a particular course.

This time provides you with the support in developing your subject knowledge and skills, and opportunities to develop and reflect on your own, independent learning. Contact time can take a wide variety of forms depending on your subject, as well as where and how you are studying. Some of the most common examples are:

- lectures
- seminars
- tutorials
- project supervisions
- demonstrations
- practical classes and workshops
- supervised time in a studio/workshop
- fieldwork
- external visits
- work-based learning (including placements)
- scheduled virtual interaction with tutor such as on line, skype, telephone

In UK higher education, you as the student take primary responsibility for your own learning. In this context, contact time with teaching and associated staff is there to help shape and guide your studies. It may be used to introduce new ideas and equip you with certain knowledge or skills, demonstrate practical skills for you to practise independently, offer guidance on project work, or to provide personalised feedback.

Alongside contact time, private or independent study is therefore very significant. This is the time that you spend learning without direct supervision from, or contact with, a member of staff. It might include background reading, preparation for seminars or tutorials, follow-up work, wider practice, the completion of assignments, revision, and so on.

Course Specific Health and Safety Issues

No specific health and safety issues have been recorded for this provision, but should this change your Course Leader will make you aware of this and provide relevant guidance as appropriate.

Course Fact File

Hierarchy of Awards:	Bachelor of Science with Honours Computer Science Bachelor of Science Computer Science Diploma of Higher Education Computer Science Certificate of Higher Education Computer Science University Statement of Credit University Statement of Credit		
Course Codes:	CS001H01HJ	Full-time	3 Years
UCAS Code:			
Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	School of Mathematics and Computer Science		
Category of Partnership:	Supported Delivery of University Provision		
Location of Delivery:	Herald College, Kathmandu, Nepal		
Teaching Institution:	Herald College, Kathmandu, Nepal		

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