Nottingham Trent University Course Specification

	Basic Course Information	
1	Awarding Institution:	**Nottingham Trent University**
2	School/Campus:	**School of Science and Technology/ Clifton campus**
3	Final Award, Course Title and Modes of Study:	**Cert HE Software Development, FT**
4	Normal Duration:	**FT 1 year**
5	UCAS code:	

6   Overview and general educational aims of the course

The Cert HE Software Developer course is designed to enable you to develop the knowledge and skills necessary to enter a career in software development (eg web or app development), as well as providing a foundation for a range of other careers in commercial computing, or to enter a university degree (Hons) course.

During this course, you will learn about the key roles within software development, and you will develop the fundamental skills needed to work in these areas. You will have the option to complete the course with an industry-led project or short placement to test and hone the skills and behaviours you have developed on the course prior to commencing work.

The course is highly biased towards developing core competencies whilst putting theory into practice through skills development and using employer set themes in seminars and assessments. This is fundamental to the way the course is taught and is an integral part of the curriculum. As well as the practical skills necessary for a Computing professional, you will develop transferable skills, much sought after by employers, which will make you suitable for general employment in an ever-changing job market.

Personalisation is built in with several modules allowing the choice of topic for projects and reports, allowing you to focus on the software development area you are interested in. Themes for these will be provided by employers so that you are working on real-world topics. Several modules also include Continuous Professional Development (CPD) within the assessment process enabling you to focus on areas of interest or development needs to increase your competency.

In brief the course aims to:

- Equip you with the knowledge and skills necessary for a career in software development

- Enable you to develop a range of transferable skills in preparation for general employment and an ever-changing job market

- Provide you with the foundation for further study

- Develop the combination of skills and knowledge required to design and develop robust, efficient, quality software.

Students who successfully complete Cert HE Software Developer will be able to progress to BSc (Hons) Software Engineering or BSc (Hons) Digital & Technology Solutions Professional (Soft Eng) apprenticeship.

7	**Course outcomes**

Course outcomes describe what you should know and be able to do by the end of your course if you take advantage of the opportunities for learning that we provide.

Knowledge and understanding. By the end of the course you should be able to:

K1. Demonstrate knowledge of the fundamental characteristics of computer systems i.e. the way information is processed, stored and communicated (B)

K2. Demonstrate a good understanding of the theory underpinning your technical skills (B)(Q)

K3. Describe the role of the computing professional and discuss the social, ethical and legal aspects of computer systems

K4. Demonstrate knowledge of theory and practice for the design, implementation and testing of computer systems (B) (Q)

K5. Identify appropriate interface technology and techniques for a range of human computer interface requirements (B) (Q)

K6. Apply appropriate techniques for quality assurance to ensure fitness for purpose, reliability, timeliness and maintainability of computer systems (B)

Skills, qualities and attributes. By the end of the course you should be able to:

S1. Select and apply appropriate analysis and design techniques to software engineering problems including formal software specification methods (B)

S2. Program to a basic level in a range of languages using the tools of the computing professional e.g. compilers, databases, operating systems (B)

S3. Evaluate requirements; define, analyse and solve problems; and evaluate potential and existing solutions (B) (Q)

S4. Gather, organise and interpret technical information demonstrating a good level of IT competency good numeracy (B)

S5. Work effectively as part of a team and work and learn independently (B) (Q)

S6. Communicate effectively via reports and presentations and develop a reasoned argument (B) (Q)

S7. Organise your work and apply project management techniques to work in a task/deliverable-orientated way (B) (Q)

(B) indicates that the outcome has been mapped to the Computing benchmark standards, which can be found at http://www.qaa.ac.uk/en/Publications/Documents/SBS-Computing-16.pdf. The Computing benchmark standards provide a national framework for describing the content and standards of a bachelors degree with honours in Computing disciplines.

(Q) indicates that the outcome has been mapped to the Framework for Higher Education Qualifications of UK Degree-Awarding Bodies - Certificate of Higher Education

8	**Learning and teaching methods**

Learning is facilitated in a range of different ways. Most modules involve a series of lectures to explain and develop the subject concepts to you. These will be alongside a variety of students on related courses, such as Computers Science disciplines and Cyber Security, facilitating your learning through perspectives outside of the Software Development field. These are accompanied by course specific seminars or laboratory sessions or sometimes a combination of both, in these you apply the theory from the lectures. This leads to a more thorough understanding of the subject and the development of any practical skills associated with it including the application in real world settings. The seminars and laboratories are also often used to help you in coursework assignments, which in themselves help to embed knowledge and develop skills. In the laboratory sessions, staff will help you to explore and use the technology, and give you feedback on your practical work. They will discuss links between theory and practice in these sessions. Some modules have optional surgery sessions to support learners, these are student-driven in that students bring to the session questions on any aspects of the module that they are finding difficult.

The nature of the subject means that much of your learning will be computer-aided. As well as using software development environments and packages for coursework implementation tasks, you will also use some computer-aided learning packages and techniques such as online discussion groups. The university runs an online Virtual Learning Environment (VLE) to support teaching and learning. All modules are represented on the VLE and most use it to provide you with the material associated with the module. Our aim is to support your development into an autonomous independent learner.

Industrial input into your learning will help prepare you for the workplace. Guest speakers from industry are central to the Professional Development for Industry module, and will provide information on a variety of topics relevant to the workplace, such as ways of working and roles available, as well as key topics within the field. Themes for coursework will be provided by employers so that you working on real-world problems. You will be supported through the tutorial system to prepare CVs and applications, and you will be given opportunities throughout the year to engage with employers, such as through our Digital Horizons week in Term 1 (which includes company talks, workplace visits and challenge events), and through an optional industry-led project at the end of the course. This will provide you with a good understanding of the careers available to you, and the skills you will need, as well as providing valuable networking opportunities. You will also be supported to find a short summer placement. These optional elements provide you with the structure and support to take ownership over your professional development as you will upon entering the workplace.

9	**Assessment methods**

Modules are either assessed via coursework, exam or a combination of both. Coursework makes up over half of the total assessment for the programme.

Coursework assessments can take many forms. You will often be given a practical task to do for the assignment which you then write up in a report. You may also have to demonstrate what you have done or give a presentation on it. Some modules involve an element of seminar contribution in the assessment and some others use computer-based assessment. Some modules will provide employer set themes for the coursework which will enable you to apply the knowledge to real world scenarios as you will be expected to do in employment.

The range of assessment methods aims to give students a variety of ways in which to demonstrate achievement as well as encouraging the development of the communication skills valued by employers.

10	**Course structure and curriculum**

The course is studied over 1 year, full time, with the options of completing a two-week industry-led project or short placement at the end of the course.

You will study a course of modules as indicated below. These develop your knowledge and skills along themes of professional skills and business knowledge; software engineering; information systems; databases; and web and mobile applications. Between them they develop the learning outcomes of the course. The mapping between the modules and the course outcomes is known as a curriculum map and is available should you be interested to see this.

Development of employability is a key strength of this course, achieved through the technical and personal skills you develop which are sought after by employers. This includes introduction to innovation and entrepreneurship as well as ethical paradigms in the IT industry. Specific preparation for work is covered in the professional development theme where you learn about CV writing and career planning whilst the seminars, labs, assignments and extra-curricular opportunities available have been structured develop core competencies that you will be expected to demonstrate in the workplace.

You need to obtain 120cp to gain the Certification of Higher Education qualification. Your final grade will be based on your performance throughout the course.

Modules:

Foundations of Computing Technology and Programming	20cps
Essential Skills	20cps
Computer Science Programming	20cps
Web-based Programming	20cps
Systems Analysis and Design	20cps
Professional Development for Industry	20cps

11	**Admission to the course**

For current information regarding all entry requirements for this course, please see the 'Applying' tab on the NTU course information web page. The full UCAS entry profile for this course can be found at: http://www.ucas.com/

12	**Support for learning**

We will work with you to ensure that you settle into your new academic environment and that your studies go well, and you will find that there are lots of people to support you at Nottingham Trent University.

All students at Nottingham Trent University have full access to Student Support Services. In addition, School based support networks are in place to offer you support, guidance and advice on academic and personal issues. Within the course, students experience the full support of the Computing and Technology Academic Team. The Head of Department, with support from the Course Manager, Course Leader(s), Module Leader(s), and Personal Tutor, takes responsibility for student support and guidance. The Module Leader will offer guidance and support to students taking each specific module.

As a new student, you will experience a minimum of a 3 day induction period at the commencement of your academic year. Induction will inform you about:

- Student Support Services at University, School and Course level;
- University policies and procedures on academic systems;
- Personal development planning;
- Timetable issues, room allocations and location;
- University, School and Course Handbooks;
- Enrolment procedures;
- Computing, IT and Library services;
- Health and Safety procedures.

You receive a course handbook that contains the essential information about the course and the support we provide for your learning. You also meet your personal tutor and year tutors.

You are assigned a personal tutor at the start of the course. They meet with you in a small group every week during the year and provide you with any advice and support that you may need. Year tutors and a course leader oversee the smooth running of the course and they also serve as an additional source of support and advice for you. Your group tutorials will help you to reflect on your career aspirations, approaches to study and make connections between modules, integrating material from across the curriculum and encouraging you to achieve your maximum potential. These will also include support from Professional Services such as Employability to further develop your workplace preparation. You will also have an opportunity to discuss and deal with any personal or course-related issues which may be affecting your studies and get advice on what support the university can offer. Personal tutorials can also be used for personal development planning and skills development.

You will meet your personal tutor during welcome week at a designated "Meet your personal tutor" session. This session includes familiarisation with NTU resources – email accounts, student timetables, NOW resources etc. Each personal tutor group consists of approximately 12 students. As part of this personal tutor group, you will meet your personal tutor for one hour, weekly, throughout the whole of level 4. Your group of students will be paired with another personal tutor group to make up a seminar/lab group. This seminar/lab group (of approximately 24 students) will be timetabled in the same lectures, seminars and labs throughout the year (subject to a course transfer). The tutorial and seminar/lab groups will be specific to your course. Throughout term 1 your tutorials will include content such as time management, mental health/resilience, NTU procedures etc. Throughout terms 2 and 3, your tutorials will continue with a greater emphasis on professional development, including content such as working in a team, presentation skills, CV development etc. You will also meet individually with your personal tutor at two points, during terms 1 and 2. These individual consultations will include reflection on your progress made, consideration of any barriers to learning and target setting.

During the second term you will receive a talk on the employability support available and opportunities for further study.

Extensive online module information including learning materials is provided on the university virtual learning environment (NOW). This also includes course information such as the course handbook and assessment deadlines. We have excellent laboratory facilities with some 24 hour availability for IT labs. The school has a Student Information Desk for assessment hand in, hand back, queries about fees and other general queries.

If you decide to opt for the placement, our placements manager will work with you to develop your C.V. and will help you to target your applications so that you get a placement that is right for you. You will be assigned a visiting tutor who will visit you at the company. Successful completion of your placement, including a written report, will enable you to receive a Certificate in Professional Practice. If you decide to opt for the industry-led project, we will support you in your application and completion of the industry-led project will count towards an NTU Employability award.

The university provide Student Support Services, who offer extensive support and advice on a range of issues, e.g. financial problems, dyslexia and disability and personal problems

http://www.ntu.ac.uk/current_students/resources/sources_support/index.html

For accommodation matters, University Accommodation Officers will provide you with information, guidance and continuing support, for example hall of residence, private rented accommodation, and the Landlord Approval Scheme. Services can be accessed through www.ntu.ac.uk

13	**Graduate destinations/employability**

Graduate employability is fundamental to the strategic aims of Nottingham Trent University, as reflected by the fact that NTU is consistently placed close to the top of the league table of all UK Universities for graduate employment.

The generic attributes acquired through the Software Developer course will equip you with the knowledge and skills necessary for a career in software development, and a broad range of other careers in commercial computing and computing-related careers.

Some graduates will choose to venture into other sectors and will be equally successful in gaining employment because of the transferable skills developed on the course. Some graduates from this course will go on to further study.

In addition to the expertise available within the Department, the University has a comprehensive careers service open to all students to assist in securing employment. http://www.ntu.ac.uk/careers/

14	**Course standards and quality**

All aspects of quality management within the School are in accordance with the University's Quality Handbook. The Course Leader and Module Leaders oversee the operational arrangements for the Course. In addition, the Course Committee, central to which are the student representatives, meets regularly throughout the year to review, evaluate and develop the Course. Formal course monitoring takes place at the end of each module through the administration of questionnaires offering closed and open-ended questions, which is in addition to informal feedback received from students throughout the year.

Overarching responsibility for quality control lies with the School Academic Standards and Quality Committee whose remit is to provide guidance and support to academic Courses. External Examiners offer further quality control through monitoring academic standards, moderation of assessment tasks and processes. Feedback from the Course Committee and student evaluation at module and course level inform the Interim Course Report (ICR), which reviews and evaluates the student experience at course level. In turn the ICR informs the School Quality and Enhancement plan (SQEP), which is presented to the University as part of the institution's quality assurance and enhancement cycle. The ICR also informs a Periodic Course Review every three years to ensure that the course remains current and that standards have been maintained.

15	**Assessment regulations**

This course is subject to the University's Common Assessment Regulations (located in Section 16 of the Quality Handbook). Any course-specific assessment features are described below:
N/A

16	**Additional information**

Collaborative partner(s):   n/a

Course referenced to national QAA   Computing
Benchmark Statements:

Course recognised by:

NTIC progression route(s):   n/a

Date this course   15 December 2020
specification approved:

Any additional information:

The Computing benchmark can be found at:

http://www.qaa.ac.uk/en/Publications/Documents/SBS-Computing-16.pdf