PROGRAMME SPECIFICATION

Awarding body/institution	Glyndŵr University
Teaching institution (if different from above)	
Details of accreditation by a professional, statutory or regulatory body (including link to relevant website)	None
What type of accreditation does this programme lead to?	N/A
Is accreditation in some way dependent on choices made by students?	N/A
Final award/s available eg BSc/DipHe/CertHE	BSc (Hons) Applied Computing BSc (Ord) Applied Computing Diploma HE(DipHE) Applied Computing Certificate HE (CertHE) Computing
Award title	BSc (Hons) Applied Computing
JACS 2 code	G400
UCAS code (to be completed by admissions)	G490
Relevant QAA subject benchmark statement/s	Computing
Other external and internal reference points used to inform the programme outcomes	
Mode/s of study *(p/t, f/t, distance learning)*	Full Time and Part Time
Language of study	English
Date at which the programme specification was written or revised	April 2012 Updated September 2012

Criteria for admission to the programme
In accordance with the University's admission policy the programme seeks to offer opportunities

to anyone able to benefit from this programme of study regardless of age, gender, ethnicity, social or educational background.

The general requirement for the honours degree is 240 UCAS points at A level or equivalent. In addition applicants must have five GCSE passes at grades A, B or C including Mathematics and English or Welsh 1st Language.

Accreditation of Prior Learning (APL) for this programme is in accordance with University policy.

Widening Participation

Applicants without recent qualifications but who can demonstrate significant recent and relevant experience for example, through employment and membership of a professional body are also encouraged to apply. An interview will be required for non-standard applicants, as determined by the relevant admissions officer.

With respect to arrangements for the admission of students with disabilities and / or specific learning differences, the University has embraced the spirit and content of the Special Education Needs and Disability Act (SENDA) documentation. All programmes in the Department of Computing have a clear and effective strategy for ensuring that access on to programmes is as wide as possible for students with declared disabilities. The process is officially initiated by application, although in many cases the discussion / dialogue commences with the first enquiry at visit days, prior to application.

Following application to the programme, a meeting with the applicant, Programme Leader, Student Support Services and the Disability Advisor for the University is convened. This allows the students' needs and the available facilities to be evaluated, and a 'support plan' is then developed and agreed by all parties. This means that support can be available immediately on enrolment. The support plan is monitored and modified as required throughout the period of study.

International/EU Students

In addition to meeting the academic requirements, applicants whose first language is not English will be required to provide evidence of competence in spoken and written English, as well as evidence of appropriate reading skills. Normally this will equate to an IELTS score of 6.0 or a TOEFL score of 550.

Equivalent qualifications will also be considered and evaluated on an individual basis as appropriate.

Aims of the programme

This programme will be embedded within the suite of computing programmes. The generic programme aims are to provide opportunities for all students to

- Produce versatile and resourceful practitioners fostering innovation, enterprise and enthusiasm for excellence in computing.
- Provide students with the knowledge and skills to equip them for a career in computing.
- Produce practitioners/graduates who can make an effective and professional contribution to the work of interdisciplinary groups engaged in computing projects.
- Develop the student's competence in applying analysis and design skills to computing problems.
- Develop the student's competence in developing robust and usable software.
- Assist the student in developing study and interpersonal skills required for both

independent, autonomous practice and teamworking.
- Develop critical, analytical problem-based learning skills and the transferable skills to prepare the student for graduate employment and continuing professional development.
- Provide students with an appropriate level of knowledge, understanding and skills in computer systems and data communications.
- Provide students with the competence to undertake computing projects on an individual basis with minimal supervision or further training.
- Provide students with an awareness of the roles and responsibilities of a professional working within the computing profession.

The course is practical in nature and its general aims are to:

- Provide the knowledge of the concepts, principles and practice from a range of discipline areas within the computing field.
- Develop the student's creative abilities through practice and evaluation of that practice, while also developing their critical understanding in the area of their choice
- Develop the student's understanding and awareness of theory and practice in their chosen area of the computing
- Stimulate an enquiring, creative, and reflective approach that encourages independent judgement and critical awareness
- Provide students with transferable skills, such as oral and written communication, time management and group working, to assist students in subsequent employment or further study
- Ensure that students have the basis for both future personal development and for continuing professional development

The programme operates a common first year and so the aims of Level 4 are the same for all undergraduate courses.

Certificate of Higher Education in Computing (Cert HE)

The first stage of all courses in the undergraduate programme consists of a set of common core modules designed to provide students with the basic knowledge needed to undertake a degree in Computing. All students are introduced to: basic concepts of object-oriented software development; object-oriented analysis and design techniques; basic knowledge of computer architecture and principles of hardware and operating systems; web techniques; and the multimedia applications. Students are expected to demonstrate basic understanding of these fundamental areas and display basic skills through a combination of written and computational work.

Distinctive features of the programme

The purpose of the Applied Computing course is to provide the student with core skills in computer systems development, with particular focus on the use and deployment of internet and multimedia technologies. The course aims to prepare students for a career in the computing and information technology industries; to provide them with an awareness of professional standards of conduct and practice; and to provide them with the ability to apply their skills, knowledge and understanding to a variety of computing problems and contexts and develop computer applications and management support systems.

This course is the most flexible degree on offer in the department. The course is designed to allow subject specialisation towards a range of subject areas across the computing curricula. The stages of the course draw entirely on existing modules offered within the Computing undergraduate curriculum. This allows effective utilisation of existing expertise and the range of options offered to students. This is achieved through a process of advice to and negotiation with

students.

The structure of the course maximises student choice, while ensuring acquisition of a balance of knowledge and skills relevant to an award in Computing.

Programme structures and requirements, levels, modules, credits and awards

All modules are 20 credits apart from the Level 6 honours Project module (40 credits) and are delivered in one semester. Students studying for BSc (Ord) may elect to undertake a 20 credit Project.

The BSc programme is normally studied over three years full-time or five years part-time, and students may if they wish move between full and part-time modes of attendance. The academic year runs from September to June. The course is divided into study units called modules, each of 20 credits apart from the Project which is 40 credits. Students complete 120 credits at each level 4, 5 and 6. Each 20 credit module represents 200 hours of student learning and assessment.

Indicative Full Time Delivery Schedule

	Semester 1			Semester 2		
Level 6	Option 5	Option 6	Option 7	IT Proj Mgt	Project/ Project Dissertation	
Level 5	Option 1	Option 2	Option 3	Systems Development Tools & Techniques	Prof Issues	Option 4
Level 4	PC & Network Technology	Intro to Software Dev	Database Design & Implementation	Creative Media	Informatics	Web Dev

Part Time delivery

Students will be progressed from the part time Foundation Degree(s) onto BSc (Hons) Applied Computing or BSc (Hons) Creative Media Computing at Level 6 (depending on Foundation Degree followed) and offered on a day release basis. The diagram below gives an indicative delivery structure for the programme.

Year 1 BSc (Hons) Applied Computing (P/T) (Direct onto L6)

Semester 1	Semester 2
Option 1	Option 2

Year 2 BSc (Hons) Applied Computing (P/T)

Semester 1	Semester 2
Option 3	Option 4
Project/ Project Dissertation	

Module List

Module Title	Core/ Optional	Level	Credit Value
Advanced Databases	O	6	20
Emerging Technology	O	6	20
Wired and Wireless Network Technology	O	6	20
Computer & Network Security	O	6	20
Windows and Web based Applications Development	O	6	20
IT Project Management	C	6	20
Project/ Project Dissertation	C (Ord/ Hons)	6	20/40
Database Administration and Optimisation	O	5	20
PC Technology	O	5	20
Network Technology	O	5	20
Mobile Device Programming	O	5	20
Agile Application Development	O	5	20
Human Computer Interaction	O	5	20
Network Management	O	5	20
Systems Development Tools & Techniques	C	5	20
Professional Issues	C	5	20
Web Applications	O	5	20
PC & Network Technology	C	4	20
Intro to Software Development	C	4	20
Creative Media	C	4	20
Databases Design & Implementation	C	4	20
Informatics	C	4	20
Web Development	C	4	20

O – Option
C – Core

Intended learning outcomes of the programme

A. Knowledge and understanding

		Level 4 Cert He	Level 5 Dip He	Level 6 Degree	Level 6 Honours Degree
A1	**Knowledge** (descriptions of facts; criteria; definitions; classifications; data organisations; principles; theories)	Demonstrates familiarity with the basic facts and principles of computing, networking and multimedia, with the concepts of information technology, business environment and communication skills as related to the IT profession, and with good and safe practice in laboratories and workshops.	Demonstrates a widening appreciation of the scope of the discipline, encompassing information technology and software development; maps existing and new knowledge into a coherent and comprehensive picture; demonstrates knowledge of the basic issues involved in applied computing.	Shows confident familiarity with the broad areas of the knowledge bases of the discipline, including advanced software development, new technologies and other key specialist areas; shows an appreciation of the principles of project management and IT strategy.	Shows confident familiarity with the defining concepts and features of the discipline, based on further study of key specialist areas, and with the concepts of the science of management associated with the development of computing applications.
A2	**Understanding** (interpretation and demonstration of understanding of knowledge in the various categories listed above)	Demonstrates a working understanding of the principles and practices of computing, networking and multimedia; shows competence in basic IT and communication skills, workshop practice and laboratory investigations.	Demonstrates a widening appreciation of the significance of central and peripheral areas of the discipline and explores its extent and boundaries through practical work, design exercises and case studies.	Reveals a working understanding of current technology and of its limits when designing, operating and maintaining computing applications; relates different subject areas to one another in a systematic and logical manner.	Reveals a clear understanding of the boundaries of existing and emerging technology and the limits of its application, and of the range of conventional design methods and the types of judgement employed by IT professionals.

B. Intellectual skills

		Level 4 Cert He	Level 5 Dip He	Level 6 Degree	Level 6 Honours Degree
B1	**Application** (use of knowledge and understanding in actual situations)	Carries out rote application of basic computing principles and procedures to standard, simple situations, with considerable guidance provided by tutors.	Applies standard computing principles and procedures to somewhat more demanding situations, still with some guidance provided.	Demonstrates ability to select and use principles and procedures appropriate to the situation or problem in hand, with minimal guidance provided.	Carries out confident and accurate selection and application of principles and procedures to the solution of a range of multimedia computing situations and problems, working autonomously.
B2	**Analysis** (breaking down complex situations into component parts)	Based on classifications presented by tutors, demonstrates some ability to analyse case study examples with the help of detailed guidance from tutors.	Demonstrates increasing ability to apply classifications and analyse relatively simple situations, still with some guidance provided.	Recognises familiar ideas or principles in new contexts or situations; analyses systematically and effectively with minimal guidance.	Identifies and classifies principles and ideas in new contexts and situations; analyses systematically, effectively and critically, working autonomously.

B3	**Synthesis** (combining elements to form new, coherent systems)	Systematically relates a limited number of facts/ideas/elements in an imitative manner, with considerable guidance provided by tutors.	Demonstrates appreciation of need for the relating and collecting of a range of facts/ideas/elements in an argued case; produces new ideas in closely-defined situations, such as the development of software, with some guidance provided as appropriate.	Shows basic ability to relate and collect facts/ideas/elements in an argued case; produces new ideas in a wider range of situations, with minimal guidance.	Brings together facts/ideas/elements in support of a well-structured argument; designs novel solutions to areas such as IT development and evolves new concepts, working autonomously.
B4	**Evaluation** (forming value judgements based on clear criteria)	Starts to form own value judgements of software development etc., based on criteria provided, albeit very reliant on tutors' evaluative opinions.	Starts to develop own criteria and develops ability to form independent judgements, although still dependent on guidance from tutors.	Identifies a range of valid alternative solutions; begins to discriminate and evaluate in a reasoned, systematic and increasingly independent way.	Integrates theory with good computing practice; autonomously evaluates theory, process, solutions related to mobile computing and outcomes critically and effectively.

C. Subject specific skills

		Level 4 Cert He	Level 5 Dip He	Level 6 Degree	Level 6 Honours Degree
C1	Students are required to develop technical skills. This involves the students engaging in practical and project work throughout the course. This work is actively integrated to ensure that students relate theory and analysis to the design, operation and maintenance of computer networks.	On successful completion of this level, the student will be able to: Demonstrates basic skills that underpin good practice in the field of computers and networking, e.g. laboratory tasks involving the creation of simple programs and the use of operating systems. Demonstrates skills in IT (e.g. word processing, spreadsheets) and web techniques (e.g. web searching, web page creation). Demonstrate an understanding of hardware issues, including interfacing and data communications, and their impact on the overall design and performance of computer based systems.	Students will deepen their knowledge of programming concepts and approaches as well as being introduced to systems development techniques, information structure, and web applications. At this level, students will also be introduced to professional, legal and ethical issues relevant to the computing and IT industry. On successful completion of this level, the student will be able to: Undertake the requirement specification and design of a computing/I.T. system using a variety of tools and techniques. Design and implement object oriented software for interactive systems that require a windows or web-based graphical user interface. Co-operate in an effective manner	Students will learn key skills of cooperation, organisation, communication, negotiation and teamwork. On successful completion of this stage, the student will be able to: Design and implement interactive systems that manage information in a variety of media types. Utilise a range of tools and techniques to develop information systems that make effective use of internet technologies.	Students will achieve effective use of investigative and design strategies, and the integration of these strategies with other tools and methodologies. These skills will be particularly demonstrated in the students' management of an individual project. The final year practical and project work will require the type of evaluation of technical and non-technical factors and the management of methodologies and progress which IT professionals exercise early in their careers. On successful completion of this stage, the student will be able to: Analyse and critically appraise current and emerging technologies.

Undertake the conceptual design of a database system using an established data modelling technique and demonstrate critical judgement in selecting a proprietary database management system for any given application. Apply object oriented software development methods and make an informed selection of algorithms and/or data representatives for solving a range of standard problems. Demonstrate an awareness and understanding of the concepts, techniques, design process and context of computer graphics	with colleagues and other professionals through the development of interpersonal and communication skills, within in a project and business context. Display knowledge and understanding of programming and professional issues.		Propose, plan, undertake and report a self-directed individual programme of investigation, design and implementation which will enable the effective use of self-directed investigative, design and other technical skills to be demonstrated through the management of an individual computing project. Demonstrate knowledge and understanding of project management techniques Develop effective and secure applications and systems that utilise and integrate Intranet and multimedia technologies. Assume an active role in the planning and control of small computer applications, both as an individual and as an effective member of a project team.

D. Practical, Professional and Employability skills

		Level 4 Cert He	Level 5 Dip He	Level 6 Degree	Level 6 Honours Degree
D1	**Communication and Presentation Skills**	Communicates in a clear and concise way, in writing and orally, in relatively informal and limited-length pieces of work. In particular written communication demonstrates competence in technical reporting.	Communicates in a clear, systematic and concise way, in writing and orally, in more formal academic and professional styles, and in longer pieces of work of a technical nature.	Engages effectively in a variety of roles; debates; produces clear, well-structured technical reports and other extended pieces of work; gives clear, subject-specific presentations in a variety of contexts.	Engages effectively in independent roles; debates in a professional manner; produces detailed critiques and coherent technical and project reports; gives confident oral and other presentations in a wide range of contexts.
D2	**Numeracy**	Demonstrates basic numeracy and algebraic competence; ability to manipulate data related to simple computer computing systems.	Demonstrates more advanced standard numerical/ mathematical skills as appropriate to their chosen specialist subject.	Applies a range of more specialist numerical/ mathematical skills as appropriate to their specialist subject and emerging personal direction.	Confidently applies a range of specialist numerical/ mathematical skills as appropriate to their individual personal direction within their specialist subject.

D3	**IT Skills**	Demonstrates basic 'load', 'use' and 'retrieve' IT skills, as appropriate to computer and network computing. Demonstrates basic skill in using the Internet and designing web pages. Accesses data and information from University and World-Wide-Web resources.	Demonstrates more advanced 'use' and 'search' IT skills; Demonstrates competent use and application of word processing, the integration of text and image in specific contexts and produces technical reports and case studies.	Demonstrates, uses and accesses a limited selection of more specialist IT skills related to multimedia development; produces detailed technical reports. Conducts effective searches for data related computing problems.	Practises a wide range of specialist IT skills, optimising as appropriate to the context of the solution of complex computing application problems where a wide range of factors and constraints must be considered simultaneously.
D4	**Learning Skills**	Studies in a systematic, directed way with the aid of appropriate tutor guidance.	Learns in an increasingly effective and purposeful way, with beginnings of development as an autonomous learner.	Adopts a broad-ranging and flexible approach to study; identifies learning needs; pursues activities designed to meet these needs in increasingly autonomous ways.	With minimal guidance, manages own learning using a wide range of resources appropriate to the IT profession; seeks and makes effective use of feedback.
D5	**Interactive and Group Skills**	Interacts effectively with tutors and fellow students; participates in clearly defined group situations.	Demonstrates more advanced interactive and group skills, including effective participation in more demanding group tasks, including a group project.	Interacts effectively within a learning or subject-specific group, including a work-experience group; demonstrates basic negotiating, role, leadership and group-support skills.	Interacts effectively within learning or professional groups; demonstrates appropriate negotiating, role, leadership and group-support skills to an advanced level.
D6	**Problem-Solving** (formulating solutions to actual problem situations)	Applies basic tools/methods to simple, standard computing/ networking problems, with the help of detailed guidance from tutors.	Applies given tools/methods accurately and carefully to more demanding problems, e.g. the development of software, still with some guidance.	Begins to self-direct, identify key elements or problems associated with selected design, and choose appropriate methods to construct their resolution, with only general guidance.	Is increasingly independent, confident and flexible in identifying and defining complex computing application problems and in the application of knowledge and skills appropriate to their solution, at the threshold of professional competence.

CURRICULUM MATRIX

	Module Title	Core Option	Knowledge and understanding, intellectual skills, subject skills, and practical, professional and employability skills												
			A1	A2	B1	B2	B3	B4	C1	D1	D2	D3	D4	D5	D6
L e v 4	PC & Network Technology	C	*	*	*	*	*	*	*	*	*	*	*		*
	Software Dev	C	*	*	*	*	*	*	*	*	*	*	*		*
	Creative Media	C	*	*	*	*	*	*	*	*	*	*	*	*	*
	Database Design	C	*	*	*	*	*	*	*	*		*	*		*
	Informatics	C		*	*	*	*	*	*	*		*	*	*	*
	Web Dev	C	*	*	*	*	*	*	*	*		*	*	*	*

	Module Title	Core Option	A1	A2	B1	B2	B3	B4	C1	D1	D2	D3	D4	D5	D6
L e v 5	Mobile Device Programming	O	*	*	*	*	*	*	*	*	*	*	*		*
	Network Management	O	*	*	*	*	*	*	*	*	*	*	*		*
	Network Technology	O	*	*	*	*	*	*	*	*	*	*	*		*
	PC Technology	O											*		
	Creative Media Design & Prod	O	*	*	*	*	*	*	*	*	*	*	*		*
	Audio & Video Production	O	*	*		*	*	*	*	*		*	*		*
	HCI	O	*	*		*	*	*	*	*	*	*	*		*
	Systems Development	C	*	*	*	*	*	*	*	*		*	*	*	*
	Prof Issues	C	*	*			*	*	*	*		*	*	*	*
	Web Apps	C	*	*	*		*	*	*	*		*	*	*	*

	Module Title	Core Option	A1	A2	B1	B2	B3	B4	C1	D1	D2	D3	D4	D5	D6
L e v 6	Wired and Wireless	O	*	*	*	*	*	*	*	*		*	*		*
	Computer & Network Security	O	*	*	*	*	*	*	*	*		*	*		*
	Developing Mobile Applications	O	*	*	*	*	*	*	*	*		*	*	*	*
	Emerging Technology	O	*	*	*	*	*	*	*	*		*	*	*	*
	Post Production & Special Effects	O	*	*	*	*	*	*	*	*	*	*	*		*
	Creative Innovation & Design	O	*	*	*	*	*	*	*	*	*	*	*		*
	IT Proj Mgt	C	*	*	*	*	*	*	*	*		*	*	*	*
	Project/ Project Dissertation	C	*	*	*	*	*	*	*	*	*	*	*		*

Learning and teaching strategy used to enable outcomes to be achieved and demonstrated

The computing programmes are designed to ensure that they reflect the latest developments and are industrially relevant.

Subjects in the computing area are geared towards practical computer systems development. They therefore focus on the fundamental concepts of computing, computer architecture, operating systems and networking, multimedia and application development. The Department of Computing shares the aims of the University of delivering a vocationally relevant education to as wide a spectrum of students as possible. The Department recognises that students may not always be sure of their choice of specialisation when they first arrive at University so, within our flexible undergraduate provision, students can enrol on any of our courses and study a common first year which will enable them to make a more informed choice with the additional ability change to another course at various stages throughout their studies.

Teaching, Learning and Assessment Strategies

The Department has a Learning, Teaching and Assessment implementation plan as part of wider University developments. This seeks to assist the student to become an independent learner whilst still supporting the students in their transition to higher education. The curriculum is designed to encourage an appreciation for learning. Learning is enriched by appropriate underpinning, current research, industrial applications and the development of transferable skills

The broad nature of the programme including common and specialist elements necessitates the use of a broad range of teaching techniques. Lectures are used as the main delivery mechanism, typically supplemented by supervised problem and lab classes, and group discussion. Some modules include group and small-scale project work, with student-led seminars and presentations. The University's VLE (Moodle) and a range of other online tools are used to support teaching. The Department also operates a number of specialist computer labs, with teaching based around the lab facilities.

(i) Lecture
    This is usually a formal discourse for the purposes of dissemination of information, the demonstration of techniques and the discussion of supporting ideas and consequences. The lecture is supported by a full range of equipment including blackboard, whiteboard, video and computer projection facilities where appropriate. Although this type of presentation is suitable for a one-sided discourse ample opportunity exists for questions, interaction and discussion.

(ii) Seminar and Tutorials
    These activities encompass a wide range of activities, each suited to the particular module. On the one hand, some tutorials will consist of the staff supporting students engaged in problem solving. On the other hand a tutorial may involve group exercises where each group is encouraged to allocate responsibilities, allocate tasks, etc.

    Generally, this type of teaching is used to support the lecture, clarify the material and experiment with the techniques and skills required.

(iii) Laboratory
    The nature of the computing elements of all courses requires students to gain practical skills in the use of a personal computer. This activity takes place in one of

the four computer laboratories and consists of the student, supported by a staff member, practising skills in the use of sophisticated software applications and including software development and systems analysis and design tools.

(iv) Group Work

On some modules, students are encouraged to work in groups to achieve set objectives. Assessment of these activities includes both group and individual elements. In this way, students learn to work as a team to achieve a common goal whilst at the same time individual contribution is recognised and evaluated.

(v) Project

The project serves the primary purpose of integrating technological and research strands, which are developed throughout the programme, and does so in the context of a research or computer systems development project.

The project typically involves the development and evaluation of the solution to a problem, which occurs within a relatively unstructured domain. The problem is original to the student and its solution therefore requires the application of knowledge and techniques either studied in the programme or acquired through independent research of recent and relevant literature.

The project provides a vehicle for integrating specialist knowledge with analytic, problem solving, managerial and communication skills. All of these are exercised and evidenced through the execution and outcomes of the project, which include a project proposal, the dissertation, and final oral presentation/demonstration.

All the modules in the programme involve relevant problem-solving, analytical, design and system development skills, designed to give students confidence in approaching tasks in Computing. Also, students taking their project/dissertation will take the Level 5 Professional Issues module, which addresses directly the skills and responsibilities of a Computing professional. All modules have a coursework element, which help to develop each student's ability to work independently and to develop skills in written communication.

Welsh Medium

At present, the Department does not have enough bilingual tutors or full-time academic staff able to deliver the programme in Welsh. However, all students have the opportunity to submit assessments in Welsh. Where a need for Welsh language assessment has been identified and no appropriate Welsh speaking tutor/assessor is available, the written assessment will be translated into English. This translation will be conducted by University qualified translators.

Additionally the programme team would wish to develop the language skills of students taking this programme. The University already offers modules in Welsh as a second language at HE level to students studying degrees which involve working with the public e.g. social work, nursing, youth and community work. It is anticipated that the BSc students whose first language is not Welsh, or who wish to improve their Welsh skills (either an improver or a new learner) would be offered these sessions as an extra module outside the programme. The University's investment in its Second Language Learning Centre ensures that this aspiration can be delivered from within existing arrangements.

Assessment strategy used to enable outcomes to be achieved and demonstrated

The Department has an agreed Assessment Strategy for all computing programmes which

provides a framework for the assessment of students' competence, knowledge and understanding, and the grading of students for progression and the conferring of awards. It allows staff to give feedback to students and to evaluate the effectiveness of their own teaching. This strategy will be closely adhered to in the delivery of the programme and is guided by QAA Code of Practice- Section 6: Assessment of Students, National Qualifications Framework, and Glyndŵr University Assessment Guidelines.

Students will receive formative assessment, particularly during the practical and self-study elements of the programme to ensure they can keep track of their progress and development. This will also be a key factor in ensuring student engagement and retention on the programme of study. In the case of practical assessment, this may be a final summative assessment, so more frequent formative assessment provides academic rigour and increases student awareness and confidence in the subject.

There will be emphasis placed upon students to undertake independent study and research activities, in particular when completing the Project/ Project Dissertation element of the course. This Project/ Project Dissertation will be facilitated by a traditional summative assessment approach at the culmination of the work, however, there will be extensive use of formative feedback, milestones, and guidance from staff during this, and other, independent-study and research-based assessment undertaken by students.

Feedback is provided continuously to students through informal contact with subject lecturers and tutors in the seminar/tutorial and laboratory settings. In accordance with University Guidance, feedback is provided on assessed practical work normally within three weeks of submission of the work.

How research, communication and employability skills are assessed

Employability Skills

Team Working: The ability to work effectively in teams, often more than one team at once, and to be able to re-adjust roles from one project situation to another in an ever-shifting work situation.
Leadership: The ability to take control of a situation and to lead by empowering others to follow.
Initiative, proactivity, self motivation: being a self starter, resilient, tenacious and determined.
Willingness to learn: the ability to learn and continue learning throughout life.
Action Planning/target setting and Self Regulatory Skills: self discipline, time-keeping, the ability to deal with stress, to plan and prioritise your workload and to "juggle" several tasks at once.
Problem-solving / intellectual skills: the ability to analyse, critique and synthesise information in order to solve problems.
Commitment: Showing an interest and dedication to a topic, subject, value or activity etc.

Course Integration	Assessment
Setting of group projects and tasks, analysis of team dynamics and roles taken in team exercises. For example, examination of nature of team roles through Belbin and other models.	Assessment of group work to include analysis of how the group worked together eg management of conflict. Presentation by group on how they worked together.
Recognition of importance of work in skills development. For example using work examples when trying to get students to relate to new concepts.	Depth of reflection in portfolio/diary/log

	Incorporation of team or group working as part of teaching and learning styles, groups not to be static but fluid to encourage development and recognition of relationship building process	Peer review of roles in the team. Self assessment of own contribution and strengths in the different team roles and action plan for future improvements.
	Chairing course / group / simulated business meetings.	Tutor feedback on team observed. Reflective diary to include account of team working practice. For example, self assessment of own contribution and strengths in the different team roles and action plan for future improvements.
	Leading a group seminar on a course project.	Presentation by individual / group on team roles / skills on placement. Assessment includes not only content but also: appropriateness of agenda, observation of correct protocol for the meeting and behaviour of chair, conflict resolution, goal setting, effective recording.
	Group project/ assignments.	Evaluation by peer assessment Evaluation from all concerned. Assessment to include not only content but also: management of time and behaviour of team members, effective planning (aims/objectives), allocation of tasks and deadlines, progress checks. Peer and tutor review. Peer review of leadership skills displayed in meetings.
	On course feedback where student receives feedback on their performance • Tutorials • Reflective assignments • End of module reviews • Action plans	Tutor feedback on performance. Self assessment on performance.
	Problem based learning scenarios.	Peer and tutor assessment on participation in discussion or tutor assessment of written report.

Any research content on the course. The extent to which the student does the minimum or exhibits real interest.	Assessment of depth and extent of research. For example, number and variety of sources cited. Evidence of reading/learning discussed in portfolio/diary/log.
Dissertation work, Final Year Project or similar major piece of work (proposal, managing the work, tutorials, evaluating progress).	Assessment to include evidence of time and resource management; planning, prioritising and problem solving (therefore stress management). Self, peer and tutor evaluation of demonstrated self regulatory skills via learning diary / logs/action plans.
Project / assignment management: a learning log or reflective diary of the process of the project.	Learning log or reflective diary of the process of the project eg attitude to problems, evidence of planning and preparation and depth of research Project supervisor assessment of evidence of commitment

Research Skills:

Course Integration	Assessment
How students approach potential sources of research information eg questionnaire and letter design.	Assessment of quality of research / investigation methods.
Depth of research in any / all aspects of course;	Depth / extent of information and understanding gained, e.g. more than one source cited, proactive research undertaken; Personal portfolio/journal/log/diary
Dissertation / final year project.	Tutor feedback and assessment, e.g. evidence of independence of study – not reliant upon continuous tutor support, evidence of appropriate time management and problem solving
Case studies – opportunities to analyse and critique "relevant" issues.	Normal assignment assessment.
Research methodology - all use of research methods as part of the course – again explicit use of the intellectual skills.	Normal assignment assessment.
Development of Project Management Skills – particularly final year project / thesis. Dealing with difficulties as they arise in assignments.	Final Year Project/ Project Dissertation to include reflection on methodology and progress of the project therefore self-assessment of ability to solve problems as

	project progressed: assessment of project management skills by tutor.

Oral/Written Communication: The ability to communicate, formally and informally, verbal and in written form, with a wide range of people

Course Integration	Assessment
On course presentations on any topic.	Assessment to include: clarity of communication, usefulness of handouts, appropriateness of information/ visual aids, structure, judgement.
Practical aspects of the course which call for the use of communication skills.	Tutor assessment of clarity of communication within log. Assessed for clarity, structure and relevance.
All essays and assignments set during the course of study.	Self assessment of communication skills against criteria.
Tutorials or participative learning	Tutor assesses strength of case. Criteria assessed; eg appropriateness, clarity, presentation, structure etc.

Assessment regulations that apply to the programme

The programme has been designed in accordance with the Glyndŵr University Regulations for Bachelor Degrees, Diplomas, Certificates and Foundation Degrees.

Programme Management

The programme will be managed under the auspices of the Department of Computing.

However, there will be a designated Programme Leader for the undergraduate Computing programmes who will be responsible for the day-to-day running of the programme, including the following:

- The management and development of curriculum and the course portfolio
- Collation of assessment data, presentation of data at assessment boards, and preparation of student transcripts
- Management/co-ordination of overall assessment activities across the programme
- Liaison with external bodies and agencies,
- Quality assurance and annual monitoring, including compilation of the Annual Monitoring Report
- Co-ordination of admissions activities and other recruitment activities, including relevant publicity activities

At module level there is devolved responsibility for the following:

- The maintenance and development of teaching and learning materials for all students enrolled on the module,
- The publishing and updating of module timetables, which shall include a weekly schedule of module sessions and required reading, to be distributed to students at the start of all modules
- The setting, marking and collation of marks for all module assessments and examination papers, including resit assessments, and submission of student results to the Programme Leader
- Tutorial support for students taking the module which they are responsible
- Quality monitoring, including processing of annual student feedback questionnaires and, where appropriate, student feedback for individual modules
- Liaison with part-time members of staff involved in module teaching

Programme Team

John Worden– Programme Leader

Nigel Houlden

John Poulton

John Davies

Dr Stuart Cunningham

Dr Rich Picking

Prof Vic Grout (Academic Head of Computing)

Rich Hebblewhite

Nathan Roberts

Bindu Jose

Denise Oram

Stephen Caulder

Particular support for learning

Students on the programme will receive the following forms of student support and guidance:

- **Admissions**. All students on the programme will have the opportunity to discuss their application with staff, and receive appropriate advice and guidance prior to admission. This will include review of expectations of the course and clarification of workload and requirements.
- **Induction**. New students on the programme will undergo an induction programme which will provide them with a full introduction to the course, and will include elements of work on study skills and professional development.
- **Student Handbook**. All students on the programme will receive a Student Handbook which will contain details and guidance on all aspects of the course and forms of student support and guidance.
- **Progress Review and Attendance Monitoring**. Student attendance will be subject to regular monitoring through registers, and this will be a means of addressing issues of student support. There will also be regular reviews for each student with personal tutors.

Student Support

The Department provides pastoral and academic support to all students enrolled on the programme. In the week prior to the start of classes, an induction programme is provided for all first year entrants. This includes an introduction to the University, to the ethos of the

Department, the staff and timetables, as well as the facilities offered by the University and Department specifically.

Every student is allocated a personal tutor in the first weeks of the programme. The personal tutor is someone students can contact to discuss any problems of a non-academic nature. These may relate to special needs or personal problems that may affect the student's academic performance.

Academic problems should first be addressed to the lecturer concerned. If the problem is not resolved or it does not relate to a specific module, then the Programme Leader should be contacted. A more detailed complaints procedure is given in the Student Handbook.

Additional support for International students

There is network of support that is available at many different levels within the University and these combine to provide a supportive framework for the international students. Specifically, this includes three main activities:

- Language provision designed to ensure that the international students have achieved a minimum level of language skills before they embark on their chosen degree programme. This is a six-week pre-sessional intensive English Language for Academic Study course that aims to bring students to an IELTS (International English Language Testing System) level of 6.5 – the standard demanded for entry into masters degree programmes.
- Glyndŵr University offers English language classes alongside studies that improve not only spoken and written English but also academic English. Classes take place weekly and are delivered by the University's English language tutors who also help students to integrate into the life of the local community as well as helping them develop transferable skills such as practical, research and report-writing skills.
- An induction / orientation course that precedes the start of formal teaching and that allows the international students to become familiar with the University and studying at the University whilst at the same time outlining some of the cultural differences that exist between their country of origin and the UK.

Equality and Diversity

The University has adopted a policy of providing equal opportunities for all its students, staff, applicants and others involved in its work. One aspect of this policy is its intention to prevent, as far as possible, the harassment of one person by another, whether on the basis of gender, sexual orientation, sexuality, race or ethnic origin, religion, disability, or any other personal attributes or views held by the person harassed.

As part of the University's Disability Policy, students with a physical disability or learning difference are encouraged to contact the University Disability Adviser to ensure their needs are acknowledged formally. The outcome of such an assessment could result, for example, in additional time being allowed for examinations, or the provision of further learning support.