**PROGRAMME DETAILS**

**Programme Code**: F2CT-CSD  
**Department**: Computer Science  
**Main Award**: BSCH - Bachelor of Science Honours  
**Full Award Title**: Bachelor of Science in Computer Systems and Diploma in Industrial Training  
**Level**: Undergraduate

**LOCATION OF STUDY**

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**ASSOCIATED AWARDS**

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**ACCREDITATION**

N/A

**LEARNING OUTCOMES – SUBJECT MASTERY**

**Understanding, Knowledge and Cognitive Skills**

- To develop knowledge and skills in the elicitation and analysis of user requirements, design and evaluation of solutions, and the implementation and quality assurance of the chosen solution.
- To be able to develop well-structured, efficient, usable and well-documented programs.
- To know what general classes of problems are amenable to computer solution and be able to select the appropriate tools required for particular problems.
- To be able to develop an abstract model for a given problem and devise appropriate mechanized techniques to solve the problem.
- To develop knowledge of the aspects of management required to understand the commercial and business contexts within which information systems are used.
- To relate theory to practice and practical application.
- To show knowledge and understanding of some major current issues in the industry in which the student is working during their work placement.
- To show knowledge and understanding of the business environment of the industry in which the student worked during their work placement.
- To undertake critical analysis, evaluation and/or synthesis of ideas, concepts, information and issues.
- To use a range of approaches to formulate evidence-based solutions/responses to defined and/or routine problems/issues.
- To critically evaluate evidence-based solutions/responses to defined and/or routine problems/issues.

**Scholarship, Enquiry and Research (Research Informed Learning)**

- To gain an understanding of the theoretical foundations of computation and its relevance to everyday computing.
• To be able to design, implement, document, verify and validate relatively large heterogeneous software systems.
• To be able to assess the quality of software systems, both in terms of their functional and non-functional properties.

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<td><strong>Industrial, Commercial and Professional Practice</strong></td>
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<td>• To maintain and update technical knowledge; to take responsibility for personal and professional development.</td>
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<td>• To appraise the impact of computers on society and the influence of society on the development of the technology and use of computers.</td>
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<td>• To assess aspects of the law related to computer-based information or the role of standards in safety, quality and security, of security issues and of the BCS Codes of Practice and Conduct.</td>
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<td>• To be able to use a range of routine skills, techniques, practices and/or materials, a few of which are advanced or complex</td>
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<td>• To be able to carry out routine lines of enquiry, development or investigation into professional-level problems and issues.</td>
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<td>• To be able to understand the commercial aspect of the company in which the student is working</td>
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<tr>
<th><strong>Autonomy, Accountability and Working With Others</strong></th>
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<td>To undertake self-directed work; to assimilate information from multiple sources; to examine results and generate conclusions; to impart ideas effectively in visual, verbal or written form.</td>
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• To work effectively either individually or as part of a team.
• To apply subject-mastery outcomes to monitor, analyse, model, specify, design, communicate, implement, evaluate, control and plan.
• To be aware of, and be able to respond to, the social and legal implications and consequences of the use of computers.
• To be able to analyse problem spaces; develop and work with abstractions; appraise material and ideas; to apply a methodical and innovative approach to problem solving; to integrate theory and practice
• To exercise autonomy and initiative in some activities at a professional-level
• To manage resources within defined areas of work
• To take the lead on planning in familiar or defined contexts
• To take continuing account of own and others' roles, responsibilities and contributions in carrying out and evaluating tasks
• To work in support of current professional practice, under guidance

| Communication, Numeracy & Information and Communications Technology |

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Page | 2 of 9
• To be able to present, analyse and interpret numerical and graphical data
• To be able to communicate effectively, informally or formally, to knowledgeable or lay audiences.
• To convey complex information to a range of audiences and for a range of purposes
• To use a variety of forms of ICT effectively in the workplace

APPROACHES TO TEACHING AND LEARNING

Lectures, Tutorials (practicals, laboratories), Coursework, (assignments, individual projects, group projects, essays, reports, presentations, log/journals, dissertation), Self-study are linked to lecture-based, resource-based and problem-based teaching styles, to relate with motivational, assimilative, consolidative and evaluative phases of learning.

Approaches to teaching and learning are continually reviewed and developed with the aim of matching them to the abilities and experiences of students, with regard also for the subject area. Specific details about teaching and learning methods are provided in the appropriate course descriptors.

EDUCATIONAL AIMS OF THE PROGRAMME

The educational aim is to provide students with a blend of Computer Science and Information Systems. Students will gain expertise in management and socio-technical systems together with a theoretical foundation in, and applied skills with, Computer Science. They will also be provided with professional skills which will enable graduates to communicate clearly, work effectively and efficiently in industry and commerce. The industrial placement will encourage students to apply learning gained through their academic studies at the University to the workplace and enable students to gain work experience which will increase their employability and professional career readiness.

ASSESSMENT POLICIES

The following assessment methods are used:

Understanding, knowledge and subject specific skills are assessed through the range of methods reflected by written examinations, coursework assignments, software artefacts, group and individual projects, written reports and oral presentations. Diagnostic, formative, continuous and summative types of assessment aim to correlate with methods of assessment.

Approaches to assessment are continually reviewed. Specific details about methods of assessment
Programme Structure

**Mandatory Courses**

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<td>2</td>
<td>F20BD</td>
<td>Big Data Management</td>
<td>15</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>5</td>
<td>2</td>
<td>F20DE</td>
<td>Digital and Knowledge Economy</td>
<td>15</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>5</td>
<td>2</td>
<td>F20EC</td>
<td>e-Commerce Technology</td>
<td>15</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>5</td>
<td>2</td>
<td>F20NA</td>
<td>Network Applications</td>
<td>15</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ELECTIVES (UG)

#### Stage 1
Any SCQF Level 7 course, which must be approved by the Board of Studies.

#### Stage 2
N/A

#### Stage 3
N/A

#### Stage 4
N/A

#### Stage 5
N/A

### COMPOSITION AND STAGE NOTES (UG)
| Stage 1 | 8 taught courses: 7 mandatory, 1 optional/elective  
Students must choose either option or elective in semester 1 |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mandatory Credits 1</td>
</tr>
<tr>
<td></td>
<td>Optional Credits 1</td>
</tr>
<tr>
<td></td>
<td>Elective Credits 1</td>
</tr>
<tr>
<td></td>
<td>Total 1</td>
</tr>
</tbody>
</table>

| Stage 2 | 8 taught courses: 6 mandatory and 2 optional  
Direct entrants to Stage 2 and internal transfers from other degrees will be expected have an appropriate background in programming and database technology  
Students must choose 2 options in semester 2 |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mandatory Credits 2</td>
</tr>
<tr>
<td></td>
<td>Optional Credits 2</td>
</tr>
<tr>
<td></td>
<td>Elective Credits 2</td>
</tr>
<tr>
<td></td>
<td>Total 2</td>
</tr>
</tbody>
</table>

| Stage 3 | 8 taught courses, all mandatory  
Direct entrants to Stage 3 will be expected have appropriate programming experience and background knowledge.  
Candidates shall pursue a group project throughout the year, which shall be synoptically assessed in conjunction with material from the associated courses (F29SO and F29PD). |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mandatory Credits 3</td>
</tr>
<tr>
<td></td>
<td>Optional Credits 3</td>
</tr>
<tr>
<td></td>
<td>Elective Credits 3</td>
</tr>
<tr>
<td></td>
<td>Total 3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage 4</th>
<th>Endustrial placement (at least 9 months duration)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mandatory Credits 4</td>
</tr>
<tr>
<td></td>
<td>Optional Credits 4</td>
</tr>
<tr>
<td></td>
<td>Elective Credits 4</td>
</tr>
<tr>
<td></td>
<td>Total 4</td>
</tr>
</tbody>
</table>
F2CT-CSD Bachelor of Science in Computer Systems and Diploma in Industrial Training

### Stage 5

- **8 courses, 3 mandatory and 5 optional**

  Students choose 3 optional courses in semester 1 and 2 optional courses in semester 2.

  In any one year not all optional courses or combinations of optional courses may be offered. Guidance in course choice will be given by academic Personal Tutors.

  Students must apply to take the course F20CL Computing in the Classroom prior to the end of Stage 3 to allow time for placements to be organised.

  Students are required to undertake an individual dissertation project (F20PA, F20PB and F20PC) which shall run throughout the year.

<table>
<thead>
<tr>
<th>Mandatory Credits 5</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Credits 5</td>
<td>75</td>
</tr>
<tr>
<td>Elective Credits 5</td>
<td></td>
</tr>
<tr>
<td><strong>Total 5</strong></td>
<td>120</td>
</tr>
</tbody>
</table>

**ASSESSMENT AND PROGRESSION (UG)**

**Reassessment Opportunities**

1. A student who has been awarded a Grade E or a Grade F in a course may be re-assessed in that course.
2. A student shall be permitted only one re-assessment opportunity to be taken at the Resit diet of examination following the first assessment of the course.
3. A student shall not be re-assessed in any qualifying course taken in the final stage of a course of study.
4. The Progression Board may permit a student to be re-assessed in any qualifying course not taken in the final stage in order to gain credits for the course, provided that the mark or grade obtained in the first assessment of any such course is used in determining the classification of the degree to be awarded.

**Progression Requirements**

**Part A.** The minimum number of credits required to progress through each stage are as follows

<table>
<thead>
<tr>
<th>Stage 1 to 2</th>
<th>120 credits (8 courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 2 to 3</td>
<td>240 credits (16 courses)</td>
</tr>
<tr>
<td>Stage 3 to 4</td>
<td>360 credits (24 Courses) and an overall exam average of 60% at the first attempt.</td>
</tr>
<tr>
<td>Stage 4 to 5</td>
<td>Students who meet the criteria to progress to Stage 4 will automatically be allowed to progress to the final year</td>
</tr>
</tbody>
</table>

**Part B.** The minimum grade of D is required in the following courses

<table>
<thead>
<tr>
<th>Stage 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development (F27SA), Interactive Systems (F27IS), Web Design &amp; Databases (F27WD), Introduction to Computer Systems (F27CS), Software</td>
</tr>
</tbody>
</table>
Development 2 (F27SB) and Software Development 3 (F27SG)

### Stage 2
- Interaction Design (F28IN) Web Programming (F28WP), Data Structures & Algorithms (F28DA), Database Management Systems (F28DM), Software Design (F28SD) and Programming Languages (F28PL)

### Stage 3
- 6 courses including Software Engineering (F29SO) & Professional Development (F29PD). Re-assessment in Stage 3 is available for credit only and not to improve overall average.

### Stage 4
- Industrial Training Placement A (F28IA) and Industrial Training Placement B (F28IB) must be passed for the award of Diploma in Industrial Training

### Stage 5:
Honours degree classification is determined by performance in:
- Stage 3 averaged over all 8 courses (20%) at the first attempt
- The 5 assessed courses in Stage 5 (50%)
- The individual dissertation project in Stage 5 (30%)

### AWARDS, CREDITS AND LEVEL (UG)

#### Part A. Credit Requirements

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Overall Credits</th>
<th>Specific Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Masters</td>
<td>600</td>
<td>600 SCQF credits including a minimum of 120 credit at Level 11</td>
</tr>
<tr>
<td>Honours Degree (inc.MA)</td>
<td>480</td>
<td>480 SCQF credits including a minimum of 180 credit at Level 9 and 10 of which at least 90 credits at Level 10</td>
</tr>
<tr>
<td>Ordinary or General Degree</td>
<td>360</td>
<td>360 SCQF credits including a minimum of 60 credit at Level 9</td>
</tr>
<tr>
<td>Diploma of Higher Education</td>
<td>240</td>
<td>240 SCQF credits including a minimum of 90 credit at Level 8</td>
</tr>
<tr>
<td>Certificate of Higher Education</td>
<td>120</td>
<td>120 SCQF credits including a minimum of 90 credit at Level 7</td>
</tr>
</tbody>
</table>

#### Part B. Mark/Grade Requirements

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Overall Mark</th>
<th>Overall Grade</th>
<th>Basis of Overall Mark/Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Masters</td>
<td>&gt;=50%</td>
<td>C</td>
<td>Credit Weighted Average &gt;=50% over all qualifying courses at Grades A-D</td>
</tr>
<tr>
<td>Honours Degree (inc.MA)</td>
<td>&gt;=40%</td>
<td>D</td>
<td>1st: Credit Weighted Average &gt;=70% Over all qualifying courses at grades A-D. 2.1: Credit Weighted Average &gt;=60% Over all qualifying courses at grades A-D. 2.2: Credit Weighted Average &gt;=50% Over all qualifying courses at grades A-D.</td>
</tr>
</tbody>
</table>
### 3rd: Credit Weighted Average >=40% Over all qualifying courses at grades A-D.

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Grade Requirement</th>
<th>Minimum Pre-requisite Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary or General Degree</td>
<td>&gt;=40% D</td>
<td>D Minimum of grade D in all pre-requisite courses.</td>
</tr>
<tr>
<td>Diploma of Higher Education</td>
<td>&gt;=40% D</td>
<td>D Minimum of grade D in all pre-requisite courses.</td>
</tr>
<tr>
<td>Certificate of Higher Education</td>
<td>&gt;=40% D</td>
<td>D Minimum of grade D in all pre-requisite courses.</td>
</tr>
</tbody>
</table>

### DURATION OF STUDY

<table>
<thead>
<tr>
<th>Program</th>
<th>Full-time</th>
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<tbody>
<tr>
<td>Integrated Masters</td>
<td>60</td>
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<tr>
<td>Honours Degree</td>
<td>48</td>
</tr>
<tr>
<td>Ordinary or General Degree</td>
<td>36</td>
</tr>
<tr>
<td>Diploma of Higher Education</td>
<td>24</td>
</tr>
<tr>
<td>Certificate of Higher Education</td>
<td>12</td>
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</table>