Change Course Specification Request and Approval Process

**CSC8360 Wireless Networking**

|  |  |  |  |
| --- | --- | --- | --- |
| In what programs is this a core course or a course in a major/specialisation: | | | MCTN |
| If a core course, does the proposed change affect the threshold learning outcomes covered in this course; and or affect external program accreditation requirements? | | | No |
| If yes please provide details of how the overall program/major/specialisation threshold learning outcomes and or accreditation requirements will be maintained given the change : | | |  |
| In what programs is this course an elective course: | | |  |
| Category | Green Category | Amber Category | Red Category |
|  | Staffing  Text  Reference Materials  Assessment Due Dates/Marks  Assessment Notes  Student Workload Requirements | Topics (<10% change)  Assessment Details  Important Assessment Information (except item 4)  Other Requirements  Pre/Co/Other Requisites (NB prereqs cannot be waived) | Topics (>10% change)  Change to Course Name/Code  Offer/Mode  Synopsis  Rationale  Objectives  Item 4 of Important Assessment Info |
| Change summary and rationale for proposed change: | new assessment details table |  |  |
| Summary of potential impact on students and management | In line with the new system setup |  |  |
| Approval level | Head of School | Assoc Dean | Executive Dean |
| Consultation Checklist:  (Library consultation required for changes to texts and references.  Campus Exec Manager consultation for changes to offer that impact Springfield and/or Ipswich. Cross School/Faculty consultation where course offered in multiple programs.) | Examiner / Moderator  Academic coordinator/s  Campus Executive Managers:  Springfield / Ipswich  Other Schools / Faculty as required.  Library | Program Mgt Team  Head of School  Examiner / Moderator  Academic Coordinator/s  Campus Executive Managers:  Springfield / Ipswich Other Schools / Faculty as required. | Program Mgt Team  Head of School  Examiner / Moderator  Academic Coordinator/s  Campus Executive Managers: Springfield / Ipswich  Other Schools / Faculty as required.  Assoc Dean Academic/s |
| Consultation undertaken for proposed change as per checklist above. |  |  |  |
| Approval Signature: |  |  |  |

Please submit to:

BELA - BELA Course and Program Management team at: [BELACourseandProgramManagement@usq.edu.au](mailto:BELACourseandProgramManagement@usq.edu.au)  
HES – HES Course and Program Management team at: [HESCourseandProgramManagement@usq.edu.au](mailto:HESCourseandProgramManagement@usq.edu.au)

**CSC8360 Wireless Networking**

**Short Description:**  Wireless Networking

**Units:** 1

**Faculty or Section:** Faculty of Health, Engineering and Sciences

**School or Department:**  School of Sciences

**Student contribution band:** Band 2

**ASCED code:** 020113 - Networks and Communications

**Grading basis:** Graded

**Version produced:** 14 October 2021

**Staffing**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

**Examiner:**   
**Moderator:**

**Requisites**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

Pre-requisite: CSC8540

**Other Requisites**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

**Rationale**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

Wireless LANs have become a ubiquitous part of home, corporate and public spaces. Network administrators and engineers will almost certainly be involved with the provision and support of wireless networks at some level in their career. As a broadcast medium, wireless presents its own challenges distinct from wired networks. Security is also an integral part of wireless networks, as the passing of unencrypted communications across public airwaves is inherently risky. When planning, implementing and supporting wireless networks, the network administrator needs to be well equipped to carefully assess the requirements of the business to provide a robust solution.

**Synopsis**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

APPROVED FOR FIRST OFFER IN 2022  
  
This course comprehensively looks at the fundamentals of wireless networking. From the standards and regulations involved to the different modes of deploying wireless devices, the course undertakes to provide a solid foundation of knowledge in the wireless networking space. Issues surrounding deployment, capacity planning, and security are discussed and the students will receive practical skills in configuring wireless devices and the services required to support a moderately sized wireless deployment. The course focusses on wireless LANs as specified in the 802.11 series of standards, but other mobile technologies are also discussed and their advantages and disadvantages analysed.

**Objectives**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

On completion of this course students should be able to:

1. Apply wireless communication principles and mobile wireless standards in the context of specific examples;
2. Analyse business requirements and choose appropriate wireless technologies to address the requirements;
3. Implement a wireless network and its supporting network infrastructure;
4. Identify and analyse security threats to wireless networks and suggest methods of mitigation;
5. Undertake complex wireless network troubleshooting;
6. Apply the ACS Code of Ethics in the context of wireless communication;
7. Apply wireless networks to support workflows of the host organization;
8. Investigate and critically assess emerging trends in wireless networking.

**Topics**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

|  |  |  |
| --- | --- | --- |
|  | **Description** | **Weighting(%)** |
| 1. | History of wireless networking | 5.00 |
| 2. | WiFi and 802.11 Regulations, Standards, Organizations and ethical practice | 15.00 |
| 3. | Spectrum use and management and signal transmission | 15.00 |
| 4. | Wireless LANs | 20.00 |
| 5. | Mesh, infrastructure mode, bridges, and other wireless modes | 5.00 |
| 6. | Wireless security | 15.00 |
| 7. | Wireless LAN design | 5.00 |
| 8. | Wireless LAN troubleshooting | 5.00 |
| 9. | Other wireless mobile technologies | 5.00 |
| 10. | Application of wireless technology to support host workflows | 5.00 |
| 11. | Emerging trends and ACS Code of Ethics in wireless networking | 5.00 |

**Text and Materials required to be purchased or accessed**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

ALL textbooks and materials available to be purchased can be sourced from [USQ's Online Bookshop](https://omnia.usq.edu.au/textbooks/) (unless otherwise stated). (https://omnia.usq.edu.au/textbooks/)

Please [contact us](https://omnia.usq.edu.au/info/contact/) for alternative purchase options from USQ Bookshop. (https://omnia.usq.edu.au/info/contact/)

There are no texts or materials required for this course.

**Reference Materials**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

**Student Workload Expectations**

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

|  |  |
| --- | --- |
| **Activity** | **Hours** |
| Assessments | 33.00 |
| Private Study | 80.00 |
| Workshops | 52.00 |

**CSC8360 Semester 2, 2022 Online** (Active)

|  |  |
| --- | --- |
| **Activity** | **Hours** |
| Assessments | 33.00 |
| Online Tutorials or Workshops | 52.00 |
| Private Study | 80.00 |
|  |  |

**Assessment Details**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Description** | **Marks out of** | **Wtg (%)** | **Due Date** | **Objectives Assessed** | **Notes** |
| Channel Capacity Estimation | 10 | 10 | 29 Jul 2022 | 1,6,7,8 |  |
| Wireless Distortion | 20 | 10 | 12 Aug 2022 | 2,4,5 |  |
| Service in Internet | 20 | 30 | 02 Sep 2022 | 2,3,4,5 |  |
| Report | 100 | 50 | 14 Oct 2022 | 1,2,3,4,5,6,7,8 |  |

|  |  |  |
| --- | --- | --- |
| **Secondary Hurdle - N** | **Group A Pass - %** | **Group B Pass - %** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Description** | **Marks out of** | **Wtg (%)** | **Hurdle Type** | **Group A** | **Group B** | **Pass (%)** |
| Channel Capacity Estimation | 10 | 10 |  |  |  |  |
| Wireless Distortion | 20 | 10 |  |  |  |  |
| Service in Internet | 20 | 30 |  |  |  |  |
| Report | 100 | 50 |  |  |  |  |

New Assessment Details

| **Approach** | **Type** | **Item** | **Item Number** | **Multipart Item Number** | **Group Assessment** | **Marks out of** | **Wtg (%)** | **Due Date** | **Objectives Assessed** | **Notes** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Assignment | Written | Problem solving | 1 |  | N | 10 | 10 | 29 Jul 2022 | 1,6,7,8 |  |
| Assignment | Written, practical | Problem solving, technical artefact | 2 |  | N | 20 | 10 | 12 Aug 2022 | 2,4,5 |  |
| Assignment | Written, practical | Problem solving, technical artefact | 3 |  | N | 20 | 30 | 02 Sep 2022 | 2,3,4,5 |  |
| Assignment | Written, practical, design | Problem solving, design. Technical artefact, report | 4 |  | N | 100 | 50 | 14 Oct 2022 | 1,2,3,4,5,6,7,8 |  |

**Important Assessment Information**

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

1. **Attendance requirements:**

It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration. This includes the recorded lectures and tutorials. To maximise their chances of satisfying the objectives of the course, students should actively participate in the course discussion group.

1. **Requirements for students to complete each assessment item satisfactorily:**

To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)

1. **Penalties for late submission of required work:**

Students should refer to the Assessment Procedure <http://policy.usq.edu.au/documents.php?id=14749PL> (point 4.2.4)

1. **Requirements for student to be awarded a passing grade in the course:**

To be assured of receiving a passing grade students must obtain at least 50% of the total weighted marks available for the course.

1. **Method used to combine assessment results to attain final grade:**

The final grades for students will be assigned on the basis of the aggregate of the weighted marks obtained for each of the summative assessment items in the course.

1. **Examination information:**

There is no examination in this course.

1. **Examination period when Deferred/Supplementary examinations will be held:**

Deferred and Supplementary examinations will be held in accordance with the Assessment Procedure <https://policy.usq.edu.au/documents/14749PL>.

1. **University Student Policies:**

Students should read the USQ policies: Definitions, Assessment and Student Academic Misconduct to avoid actions which might contravene University policies and practices. These policies can be found at <http://policy.usq.edu.au>.

**CSC8360 Semester 2, 2022 Online** (Active)

1. **Attendance requirements:**

There are no attendance requirements for this course. However, it is the students' responsibility to study all material provided to them or required to be accessed by them to maximize their chance of meeting the objectives of the course and to be informed of course-related activities and administration.

1. **Requirements for students to complete each assessment item satisfactorily:**

To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)

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**Assessment Notes**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

1. The due date for an assignment is the date by which a student must despatch the assignment to the USQ. Students must retain a copy of each item submitted for assessment purposes. Such copies should be despatched to the USQ within 24 hours of receipt of a request to do so.
2. Electronic submission of assignments is required for this course. All submissions must be made through the Assignment Drop Box located on the USQ study desk for this course, unless directed otherwise by the examiner of the course. Students must retain a copy of each item submitted for assessment. This must be despatched to USQ within 24 hours if requested by the Examiner.
3. Reliable access to the internet is a requirement of this course as the course contains electronic assessment and submission elements. In order to avoid internet issues, on-campus students should upload their assignments electronically using the same computer laboratories. Online students who knowingly do not have reliable access to the internet should actively seek alternative internet access (e.g., Internet cafes, local libraries, or work places) for assessment submission. Online students are able to use the on-campus student computer laboratories once access has been enabled. To be granted access, Online students need to contact ICT and ask to have a student account enabled so that they can work on-campus.
4. Students are expected to open their university provided email account and check it regularly for personal communication. In accordance with the Electronic Communication with Students Policy and Procedure (<http://policy.usq.edu.au/documents.php?id=13306PL)> information sent to the student's USQ email account will be regarded as being received.
5. APA style is the referencing system required in this course. Students should use the 6th or 7th edition of the APA Style Manual to format their assignments. The APA Style to be used is defined by the USQ Library's referencing guide. <http://www.usq.edu.au/library/referencing>

**Evaluation and Benchmarking**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

In meeting the University’s aims to establish quality learning and teaching for all programs, this course monitors and ensures quality assurance and improvements in at least two ways.   
This course:

1. Conforms to the USQ Policy on Evaluation of Teaching, Courses and Programs to ensure ongoing monitoring and systematic improvement.
2. Forms part of the Master of Information Technology and is benchmarked against the:

• internal USQ accreditation/reaccreditation processes which include (i) stringent standards in the independent accreditation of its academic programs, (ii) close integration between business and academic planning, and (iii) regular and rigorous review; and  
• professional accreditation standards of the Australian Computer Society (ACS).

**Other Requirements**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

**Exam Data**

**CSC8360 Semester 2, 2022 Online** (Active)

**CSC8360 Semester 2, 2022 Toowoomba On-campus** (UNKNOWN)

No exam data for this course.