SUBJECT OUTLINE

31927 Application Development with .NET

Course area UTS: Information Technology
Delivery Spring 2019; standard mode; City
Credit points 6cp
Requisite(s) 48024 Applications Programming
Result type Grade and marks

Recommended studies: a good understanding of programming constructs, O-O concepts and programming practices

Subject coordinator

Dr. Nabin Sharma
Room: CB11.07.124
Phone: 9514 1835
Email: Nabin.Sharma@uts.edu.au

Questions regarding assessment or content within the subject are welcome in lectures or tutorials or alternatively post them to the discussion board in UTS Online. This helps ensure that all students get the benefit of the answers given.

The Subject Coordinator may be contacted by email if you have matters of a personal nature to discuss, e.g., illness, study problems, and for issues to do with extensions, group problems or other matters of importance.

All emails sent to subject coordinators, tutors or lecturers must have a clear subject line that states the subject number followed by the subject of the email [e.g. Subject 32702, Request for Extension], and must be sent from your UTS email address.

Consultation hours: Check the UTSOnline Contact section for details on consultation hours. Requests for appointments outside the given consultation hours may be arranged where circumstances require, and to do so please contact the subject coordinator by email.

Teaching staff

Lecturer: Dr. Nabin Sharma

Email: Nabin.Sharma@uts.edu.au

Subject description

This subject introduces C#, Visual Studio and the .NET development environment. The emphasis is on examining the .NET framework and the practicalities of developing software in this setting using the C# language.

Subject learning objectives (SLOs)

Upon successful completion of this subject students should be able to:

1. Understand the .NET framework architecture.
2. Understand how the .NET framework implements OO concepts and the implications this has for new language design.
3. Understand the mechanisms and techniques for the deployment and configuration of .NET applications.
4. Be able to utilize the .NET libraries.
5. Have practical experience of how to write C# programs in the .NET environment.

Course intended learning outcomes (CILOs)

This subject also contributes specifically to the development of the following Course Intended Learning Outcomes (CILOs):

- Identify and apply relevant problem-solving methodologies (B.1)
- Design components, systems and/or processes to meet required specifications (B.2)
- Implement and test solutions (B.5)

Teaching and learning strategies

1.5 hour lecture
1.5 hour lab
UTS Online Discussion board

Content (topics)

1. The .NET framework Common Language Runtime, Common Type System, Common Language Specification
2. Introduction to C# within the .NET Framework
3. Programming C# .NET
4. Windows Forms and Controls
5. Object Oriented Programming and Design concepts in the .NET Framework
6. Debugging techniques in the .Net Framework
7. Data structures in the C# .NET
8. LINQ to Objects

Program

Week/Session	Dates	Description
1	22 Jul	Lecture 1: Introduction to Application Development with .NET, and .NET Overview
2	29 Jul	Lecture 2: Programming in C# 1 **Notes:** Quiz 1: In Lab/Tutorial session.
3	5 Aug	Lecture 3: Programming in C# 2
4	12 Aug	Lecture 4: Debugging **Notes:** Quiz 2: In Lab/Tutorial session.
5	19 Aug	Lecture 5: Programming with C# 3 and Forms
6	26 Aug	Lecture 6: Inheritance, Polymorphism and Interfaces **Notes:** Quiz 3: In Lab/Tutorial session.

7	2 Sept	Lecture 7: Design & Generics
StuVac	9 Sept	**Stuvac - No classes this week**
8	16 Sept	Lecture 8: Collections **Notes:** **Assignment-1 due on Monday 16th Sept 2019, 11.59pm, this week. Code to be submitted to UTS Online by midnight on the due date.** **Functionality to be demonstrated in labs this week.**
9	23 Sept	Lecture 9: Delegates, anonymous methods and events **Notes:** Quiz 4: In Lab/Tutorial session.
10	30 Sept	Lecture10: Lambda and LINQ
11	7 Oct	Lecture10: .Net in Industry: Special/Guest Lecture **Notes:** Quiz 5: In Lab/Tutorial session.
12	14 Oct	Lecture 11: Recap **Notes:** **Assignment 2 due on Monday, 14th Oct. 2019, 11.59pm, this week. Code to be submitted to UTS Online by midnight on the due date.** **Functionality to be demonstrated in labs this week.**

Assessment

Assignment Submission and Return:
Assignments will be submitted via UTSOnline by the due date and be ready for demonstration in the lab on the specified week. Full details will be given in the assignment specification.

Assignment Feedback:
Consistent with UTS policy, students will receive feedback in a timely manner that assists them to understand the learning objectives achieved and how they could improve the quality of their work. Feedback on assessments will given by tutors in labs. Additionally, the final marks will also include feedback from the markers.

Group Work:
Both assignments are individually developed and marked. There is NO group work.

Missing Assessment:
If you miss any piece of assessment through documented illness or misadventure, you should consult with the Subject Coordinator. In the case of the final examination, your "Application for Alternative Examination (due to Illness or

Misadventure)" form must be submitted with appropriate documentation to the Student Information & Administration Centre within three working days of the examination.

Assessment task 1: Programming Assignment

Objective(s): This assessment task addresses the following subject learning objectives (SLOs):

3, 4 and 5

This assessment task contributes to the development of the following course intended learning outcomes (CILOs):

B.1, B.2 and B.5

Type: Exercises

Groupwork: Individual

Weight: 35%

Task: Develop a Visual Studio console application in C# that makes use of command line arguments.

Once completed, the entire Visual Studio project will be submitted via UTS Online.

The assignment will then be formally demonstrated in the students assigned laboratory the week after the due date.

A complete description of the assignment will be given on the release date.

Length: Between 200 and 300 lines of code.The exact number will depend on how the students solves the task.

Due: Week 8
Online Submission: Monday 16th September 2019, by 11.59 pm.
Demonstrations: During the Labs of Week 8.
Code to be uploaded to UTS Online by midnight (11.59 pm) on the due date. Functionality to be demonstrated in labs.
See also Further information.

Criteria linkages:

Criteria	Weight (%)	SLOs	CILOs
Functionality	50	3, 4, 5	B.5
Design	35	3, 4, 5	B.2
Programming Style	15	3, 4, 5	B.1

SLOs: subject learning objectives
CILOs: course intended learning outcomes

Further information: PLEASE NOTE. The criteria weightings given in the Subject Outline are a rough approximation. Please see the Assignment Specification for a detailed explanation of how the criteria are combined

Assessment task 2: Programming Assignment

Objective(s): This assessment task addresses the following subject learning objectives (SLOs):

3, 4 and 5

This assessment task contributes to the development of the following course intended learning outcomes (CILOs):

B.1, B.2 and B.5

Type: Exercises

Groupwork: Individual

Weight: 35%

Task: Develop a Visual Studio Windows form application in C#.

Once completed, the entire Visual Studio project will be submitted via UTS Online.

The assignment will then be formally demonstrated in the students assigned laboratory the week after the due date.

A complete description of the assignment will be given on the release date.

Length: 300 to 400 lines of code. The number of lines will depend on the solution the student develops for the assignment.

Due: Week 12
Online Submission: Monday 14th October 2019, by 11.59 pm.
Demonstrations: During the Labs of Week 12.
Code to be uploaded to UTS Online by midnight (11.59 pm) on the due date. Functionality to be demonstrated in labs.
See also Further information.

Criteria linkages:

Criteria	Weight (%)	SLOs	CILOs
Functionality	50	3, 4, 5	B.5
Design	35	3, 4, 5	B.2
Programming Style	15	3, 4, 5	B.1

SLOs: subject learning objectives
CILOs: course intended learning outcomes

Further information: PLEASE NOTE. The criteria weightings given in the Subject Outline are a rough approximation. Please see the Assignment Specification for a detailed explanation of how the criteria are combined

Assessment task 3: Quizzes

Objective(s): This assessment task addresses the following subject learning objectives (SLOs):

1 and 2

This assessment task contributes to the development of the following course intended learning outcomes (CILOs):

B.1

Type: Quiz/test

Groupwork: Individual

Weight: 30%

Task: There will be multiple-choice questions. Calculators are not permitted.

Due: In class in tutorial/lab session

Criteria linkages:

Criteria	Weight (%)	SLOs	CILOs
Correctness of solution in multiple-choice questions	100	1, 2	B.1

SLOs: subject learning objectives
CILOs: course intended learning outcomes

Moderation of marks
Programing assessments are marked against objective criteria and so moderation is not needed. For the exam, free text answers will be moderated by a member of the teaching staff to ensure consistency in marking.

Minimum requirements
In order to pass the subject, a student must achieve an overall mark of 50% or more.

Recommended texts
Links to online resources will be provided on UTSOnline.

Other resources
A UTSOnline workspace will be available to enrolled students providing tools to support collaboration and communication with staff and other students. UTSOnline can be found at: online.uts.edu.au.

Graduate attribute development
For a full list of the faculty's graduate attributes, refer to the FEIT Graduate Attributes webpage.

Assessment: faculty procedures and advice
Extensions

When, due to extenuating circumstances, you are unable to submit or present an assessment task on time, please contact your subject coordinator before the assessment task is due to discuss an extension. Extensions may be granted up to a maximum of 5 days (120 hours). In all cases you should have extensions confirmed in writing.

Special consideration

If you believe your performance in an assessment item or exam has been adversely affected by circumstances beyond your control, such as a serious illness, loss or bereavement, hardship, trauma, or exceptional employment demands, you may be eligible to apply for Special Consideration.

Late penalty

Work submitted late without an approved extension is subject to a late penalty of 10 per cent of the total available marks deducted per calendar day that the assessment is overdue (e.g. if an assignment is out of 40 marks, and is submitted (up to) 24 hours after the deadline without an extension, the student will have four marks deducted from their awarded mark). Work submitted after five calendar days is not accepted and a mark of zero is awarded.

For some assessment tasks a late penalty may not be appropriate – these are clearly indicated in the subject outline. Such assessments receive a mark of zero if not completed by/on the specified date. Examples include:

a. weekly online tests or laboratory work worth a small proportion of the subject mark, or
b. online quizzes where answers are released to students on completion, or
c. professional assessment tasks, where the intention is to create an authentic assessment that has an absolute

submission date, or
d. take-home papers that are assessed during a defined time period, or
e. pass/fail assessment tasks.

Querying results

If students wish to query their result in an individual assessment task or the final examination, the process to follow can be found at Querying a mark or grade. The deadline is five working days from the date of release of the result.

If students wish to query their final overall result in a subject, they may request a review of final subject assessment result. The deadline is five working days from the date of release of the result.

Academic liaison officer

Academic liaison officers (ALOs) are academic staff in each faculty who assist students experiencing difficulties in their studies due to: disability and/or an ongoing health condition; carer responsibilities (e.g. being a primary carer for small children or a family member with a disability); and pregnancy.

ALOs are responsible for approving adjustments to assessment arrangements for students in these categories. Students who require adjustments due to disability and/or an ongoing health condition are requested to discuss their situation with an accessibility consultant at the Accessibility Service before speaking to the relevant ALO.

The ALO for undergraduate students is:

Brian Tucker
telephone +61 2 9514 2627

The ALO for postgraduate students is:

Dr Nham Tran
telephone +61 2 9514 4468

Statement about assessment procedures and advice

This subject outline must be read in conjunction with the policy and procedures for the assessment for coursework subjects, available at: www.gsu.uts.edu.au/policies/assessment-coursework.html

Statement on copyright

Teaching materials and resources provided to you at UTS are protected by copyright. You are not permitted to re-use these for commercial purposes (including in kind benefit or gain) without permission of the copyright owner. Improper or illegal use of teaching materials may lead to prosecution for copyright infringement.

Statement on plagiarism

Plagiarism and academic integrity

At UTS, plagiarism is defined in Rule 16.2.1(4) as: 'taking and using someone else's ideas or manner of expressing them and passing them off as ... [their] own by failing to give appropriate acknowledgement of the source to seek to gain an advantage by unfair means'.

The definition infers that if a source is appropriately referenced, the student's work will meet the required academic standard. Plagiarism is a literary or an intellectual theft and is unacceptable both academically and professionally. It can take a number of forms including but not limited to:

- copying any section of text, no matter how brief, from a book, journal, article or other written source without duly acknowledging the source
- copying any map, diagram, table or figure without duly acknowledging the source
- paraphrasing or otherwise using the ideas of another author without duly acknowledging the source
- re-using sections of verbatim text without using quote marks to indicate the text was copied from the source (even if a reference is given).

Other breaches of academic integrity that constitute cheating include but are not limited to:

- submitting work that is not a student's own, copying from another student, recycling another student's work, recycling previously submitted work, and working with another student in the same cohort in a manner that exceeds the boundaries of legitimate cooperation
- purchasing an assignment from a website and submitting it as original work

- requesting or paying someone else to write original work, such as an assignment, essay or computer program, and submitting it as original work.

Students who condone plagiarism and other breaches of academic integrity by allowing their work to be copied are also subject to student misconduct Rules.

Where proven, plagiarism and other breaches of misconduct are penalised in accordance with UTS Student Rules Section 16 – Student misconduct and appeals.

Avoiding plagiarism is one of the main reasons why the Faculty of Engineering and IT is insistent on the thorough and appropriate referencing of all written work. Students may seek assistance regarding appropriate referencing through UTS: HELPS.

Work submitted electronically may be subject to similarity detection software. Student work must be submitted in a format able to be assessed by the software (e.g. doc, pdf (text files), rtf, html).

Further information about avoiding plagiarism at UTS is available.

Retention of student work

The University reserves the right to retain the original or one copy of any work executed and/or submitted by a student as part of the course including, but not limited to, drawings, models, designs, plans and specifications, essays, programs, reports and theses, for any of the purposes designated in Student Rule 3.9.2. Such retention is not to affect any copyright or other intellectual property right that may exist in the student's work. Copies of student work may be retained for a period of up to five years for course accreditation purposes. Students are advised to contact their subject coordinator if they do not consent to the University retaining a copy of their work.

Statement on UTS email account

Email from the University to a student will only be sent to the student's UTS email address. Email sent from a student to the University must be sent from the student's UTS email address. University staff will not respond to email from any other email accounts for currently enrolled students.