### **School of Information and Physical Sciences**

**INFT3050: Web Programming** Callaghan and Ourimbah Semester 2 - 2023



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# **OVERVIEW**

| Course Description                 | Introduces concepts and skills needed to develop and manage<br>small to medium web facing server systems. Covers object<br>oriented techniques, event-driven programming, development or<br>effective user interfaces, database integration and server side<br>scripting.   |
|------------------------------------|---|
| Requisites                         | This course replaces INFT2008. If you have successfully completed INFT2008 you cannot enrol in this course.   |
| Assumed Knowledge<br>Contact Hours | COMP1140 Database & Information Management and either<br>INFT2012 Application Programming or SENG1110 Object<br>Oriented Programming<br>Computer Lab<br>Face to Face On Campus<br>2 hour(s) per Week for 12 Weeks starting Week 2<br>Lecture<br>Face to Face On Campus<br>2 hour(s) per Week for 12 Weeks starting Week 1 |
| Unit Weighting<br>Workload         | 10<br>Students are required to spend on average 120-140 hours of<br>effort (contact and non-contact) including assessments per 10<br>unit course.   |



## CONTACTS

| Course Coordinator | <b>Callaghan and Ourimbah</b><br>Dr Jacqueline Bailey<br>Jacqueline.D.Bailey@newcastle.edu.au<br>(02) 491 38780<br>Consultation: See Canvas for Time/Day and Zoom link   |
|--------------------|--|
| Teaching Staff     | Other teaching staff will be advised on the course Canvas site.  |
| School Office      | School of Information and Physical Sciences<br>SR233, Social Sciences Building<br>Callaghan<br>CESE-SIPS-Admin@newcastle.edu.au<br>+61 2 4921 5513<br>9am-5pm (Mon-Fri)<br>School of Information and Physical Sciences<br>SR233 Social Sciences Building<br>Callaghan<br>CESE-SIPS-Admin@newcastle.edu.au<br>+61 2 4921 5513 |

# **SYLLABUS**

| Course Content | 1. | Web based server side systems                     |
|----------------|----|---|
|                | 2. | Event Driven Programming                          |
|                | 3. | Server and Client side scripting                  |
|                | 4. | Interactive Development Environments (IDE's)      |
|                | 5. | Object-oriented design, reuse, the user interface |
|                | 6. | Database interfacing                              |

| Course Learning<br>Outcomes | <b>On successful completion of this course, students will be able to:</b><br>1. Design and develop a robust web-browser based, aesthetic and intuitive user-interface<br>that applies the concepts of Model-View-Controller web app. |
|-----------------------------|--|
|                             | 2. Implement a comprehensive Model-View-Controller web app capable of connecting to a prototype server-side web-application that displays editable information from a database in a web browser                                      |
|                             | <b>3</b> . Create a prototype multi-component server-side, end-user focused web-application that can pass data between components to present reports from a database.  |
|                             | 4. Demonstrate both team and self-management principles typically seen in the industry to deliver a prototype Model-View-Control web app solution  |
| Course Materials            | <ul> <li>Lecture Materials:</li> <li>Lecture notes will be provided on Canvas each Monday for that week's content. Lecture notes are directly related to the prescribed required textbook for the course.</li> </ul>                 |
|                             | <ul> <li>Other Resources:</li> <li>Each week additional supporting reading material will be made available through<br/>Canvas to complement each weeks Lab and Lecture content.</li> </ul>   |

#### **Required Reading:**

- Each Lab session you will be required to read supporting material to complete weekly tasks. These task completion are essential for completing the 2 major assignments.



#### Required Text:

 Mary Delamater & Anne Boehm, "Murach's ASP.Net Core MVC," 2 Edition, Murach Publishing, ISBN: 978-1-943873-02-9

## **COMPULSORY REQUIREMENTS**

In order to pass this course, each student must complete ALL of the following compulsory requirements:

#### **Course Assessment Requirements:**

Assessment 2 - Formal Examination: Pass Requirement - Students must pass this assessment item to pass the course. Students whose overall mark in the course is 50% or more, but who score less than 40% in the compulsory item and thus fail to demonstrate the required proficiency, will be awarded a Criterion Fail grade which will show as FF on their formal transcript.

However, students in this position who have scored at least 25% in the compulsory assessment item will be allowed to undertake a supplementary 'capped' assessment in which they can score at most 50% of the possible mark for that item.

## ASSESSMENTS

This course has 4 assessments. Each assessment is described in more detail in the sections below.

|   | Assessment Name             | Due Date                   | Involvement | Weighting | Learning<br>Outcomes |
|---|-----------------------------|----------------------------|-------------|-----------|----------------------|
| 1 | Programming<br>Assignment 1 | Week 7, Sunday 23:59 AEST  | Combination | 20%       | 1, 2, 3, 4           |
| 2 | Examination*                | Formal Exam Period         | Individual  | 30%       | 1, 4                 |
| 3 | Programming<br>Assignment 2 | Week 12, Sunday 23:59 AEST | Combination | 50%       | 1, 2, 3, 4           |

\* This assessment has a compulsory requirement.

Late Submissions The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

### Assessment 1 - Programming Assignment 1

| Assessment Type     | Written Assignment  |
|---------------------|---|
| Description         | Draft MVC Prototype Solution  |
| Weighting           | This is a formative assessment and will not contribute to your final grade. |
| Due Date            | Week 7, Sunday 23:59 AEST   |
| Submission Method   | Online  |
| Assessment Criteria | Provided Online   |
| Return Method       | Online  |
| Feedback Provided   | Online  |

#### **Assessment 2 - Examination**

| Assessment Type<br>Purpose | Formal Examination<br>To test theoretical knowledge gained in the course.  |
|----------------------------|--|
| Description                | Will be an online Canvas based multiple choice exam. It will be held during the formal exam period. Questions will be based on the course content, from the prescribed textbook. |
| Weighting                  | 20%  |
| Compulsory                 | Pass Requirement - Students must pass this assessment item to pass the course.   |
| Requirements               |  |
| Length                     | 1.5 hours  |
| Due Date                   | Formal Exam Period   |
| Submission Method          | Formal Exam  |
| Assessment Criteria        | Individual, Formal Exam.   |
| Return Method              | Not Returned   |
| Feedback Provided          | No Feedback  |



| Opportunity to | Students WILL be given the opportunity to reattempt this assessment. |
|----------------|--|
| Reattempt      | Refer to course outline for details.                                 |

### **Assessment 3 - Programming Assignment 2**

| Assessment Type<br>Description | Written Assignment<br>Final MVC Prototype Solution                          |
|--------------------------------|---|
| Weighting                      | This is a formative assessment and will not contribute to your final grade. |
| Due Date                       | Week 12, Sunday 23:59 AEST  |
| Submission Method              | Online  |
| Assessment Criteria            | Provided Online   |
| Return Method                  | Online  |
| Feedback Provided              | Online  |

## ADDITIONAL INFORMATION

#### **Grading Scheme**

| Range of<br>Marks | Grade                       | Description  |
|-------------------|-----------------------------|--|
| 85-100            | High<br>Distinction<br>(HD) | Outstanding standard indicating comprehensive knowledge<br>and understanding of the relevant materials; demonstration of<br>an outstanding level of academic achievement; mastery of<br>skills*; and achievement of all assessment objectives.             |
| 75-84             | Distinction<br>(D)          | Excellent standard indicating a very high level of knowledge<br>and understanding of the relevant materials; demonstration of<br>a very high level of academic ability; sound development of<br>skills*; and achievement of all assessment objectives.     |
| 65-74             | Credit<br>(C)               | Good standard indicating a high level of knowledge and<br>understanding of the relevant materials; demonstration of a<br>high level of academic achievement; reasonable development<br>of skills*; and achievement of all learning outcomes.               |
| 50-64             | Pass<br>(P)                 | Satisfactory standard indicating an adequate knowledge and<br>understanding of the relevant materials; demonstration of an<br>adequate level of academic achievement; satisfactory<br>development of skills*; and achievement of all learning<br>outcomes. |
| 0-49              | Fail<br>(FF)                | Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.  |

\*Skills are those identified for the purposes of assessment task(s).

Communication Methods

Communication methods used in this course include:

- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face to face meetings or supervision.



| Course Evaluation               | Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.  |
|---------------------------------|---|
| Oral Interviews (Vivas)         | As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the <u>Oral Examination (viva)</u> <u>Procedure</u> . In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the <u>Student Conduct Rule</u> .  |
| Academic Misconduct             | All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35.  |
| Adverse<br>Circumstances        | <ul> <li>The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where: <ol> <li>the assessment item is a major assessment item; or</li> <li>the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;</li> <li>you are requesting a change of placement; or</li> <li>the course has a compulsory attendance requirement.</li> </ol> </li> <li>Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at: <ul> <li>https://policies.newcastle.edu.au/document/view-current.php?id=236</li> </ul> </li> </ul> |
| Important Policy<br>Information | The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at https://www.newcastle.edu.au/current-students/no-room-for/policies-and-procedures that support a safe and respectful environment at the University.   |



#### **Graduate Profile Statements**

The following table illustrates how this course contributes towards building the skills students will need to work in their profession.

Level of capability

- Level 1 indicates an introduction to a topic at a university level
- Levels 2 and 3 indicate progressive reinforcement of that topic
- Level 4 indicates skills commensurate with a graduate entry to professional practice
- Level 5 indicates highly specialist or professional ability

|   | University of Newcastle<br>Bachelor of Information Technology<br>Graduate Profile Statement  | Taught | Practised | Assessed | Level of capability |
|---|--|--------|-----------|----------|---------------------|
| 1 | Demonstrate a comprehensive understanding of the discipline of information technologies with an emphasis on net-centric applications, information management, and user requirements for ethical professional practice. | х      | Х         | Х        | 3                   |
| 2 | Apply critical reasoning and systems thinking to<br>understand and support the operation and<br>constraints of contemporary enterprises and their<br>dynamic environment.  |        |           |          |                     |
| 3 | Work independently and collaboratively to locate,<br>manage and organise information and resources<br>and apply evidence-based methodologies to create,<br>modify and maintain designs and design solutions.           | Х      | х         | х        | 3                   |
| 4 | Use creativity, problem solving skills, project<br>management skills and technical expertise to<br>analyse, interpret, evaluate and generate solutions<br>to complex technical and organisational problems.            | Х      | х         | х        | 3                   |
| 5 | Demonstrate professional judgement and<br>responsibility by communicating information<br>technology principles, practices, standards to<br>specialist and non-specialist audience clearly and<br>persuasively.         |        |           |          |                     |

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.

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