

COURSE OUTLINE

COMP503

Fundamentals of Computer Programming

## **++This course outline template covers all programmes at AIS and will require adaptation for each programme’s requirements. Elements of the course outline should not be changed without careful consideration to its role, which is to communicate information to the students enrolled in the course.**

## **Information in this course outline is taken from the course descriptor, which is part of the NZQA-approved programme document. The latest course descriptors are located on S:\Approved Programmes - NZQA docs. INFORMATION CONTAINED IN COURSE DESCRIPTORS CANNOT BE CHANGED WITHOUT BOARD OF STUDIES APPROVAL.++**

PREREQUISITES:

None

**++Remove if no prerequisites++**

CO-REQUISITES:

None

**++Remove if no co-requisites++**

RESTRICTIONS:

None

**++Remove if no restrictions++**

NZQF Level: 5

Credits: 15

Lecturer: Sdfsdf

Room: SDFSDF

Phone: +815-1717+ ext.# **++Delete if adjunct++**

Email: sdfsdf@sfsdf.com

Contact hour: 01:01 AM

Also, outside of this time by appointment

**++OR++**

**Lecturers:** +Lecturer Name email+

+Lecturer Name email+

**++OR++**

Course Coordinator: Sdfsdf

Room: +Room #+

Phone: +815-1717+ ext.# **++Delete if adjunct++**

Email: +E-mail address+

Contact hour: +Contact time for this course+

Also, outside of this time by appointment

## Course AIM

The aim of the course is to:

* This course introduces students to the fundamental principles of computing logic and the development of problem solving skills using structured programming techniques. The student will acquire basic competence in the chosen programming language and will apply this language to simple tasks using good programming techniques. It includes requirements for problem solving using given tools, steps and strategies, problem analysis, program development and testing. Students will be able to demonstrate an understanding of different programming language features.

## Learning outcomes

The learners will be able to:

1. Understand and construct structured programming designs for a given business requirement including basic elements of computer programming such as variables, data and error types, statements, expressions, operators and graphical user-interface.
2. Understand and apply the simple and nested selection/decision control structure when writing program code to make a decision.
3. Apply the knowledge of pre & post tested loop/repetitive control structure when writing program code to process same sequence of tasks/activities.
4. Familiarise with the concept of divide & conquer, and use the technology of “method” for writing effective, efficient and reusable computer program.
5. Demonstrate an understanding of static & dynamic arrays, single & multi-dimensional arrays which are frequently used in writing program code for searching and sorting data.

Demonstrate an understanding of text file operation (reading/writing) and develop the appropriate program code for such operation including exception handling and data validation.

Develop workplace soft-skills including working in groups, writing formal reports, carrying out individual research and/or delivering oral presentations

## Course DURATION

**++FOR TRIMESTER-BASED COURSES++**

The course will be conducted over a 14-week period with a typical teaching week consisting of +no of hours+ hours of classes.

Classes will be held at the following times:

+Day+ +Time+ – +Time+ +Room #+

+Day+ +Time+ – +Time+ +Room #+

**++FOR BA COURSES++**

The course will be conducted over +XX+ weeks and includes +NUMBER OF DAYS, TIMES.+

**100% attendance is an AIS and Immigration New Zealand requirement.**

## Learning hours

The course involves +NUMBER OF HOURS [i.e.10 x #credits]+ hours of learning: +IN-CLASS HOURS+ hours of structured in-class learning and +OUT-OF-CLASS HOURS+ of associated learning activities such as reading course materials, preparing for class, working on assignments, or peer group discussions and reviewing feedback or material. An indicative time allocation is shown below.

**++MODIFY THE TABLE BELOW AS NECESSARY. MAKE SURE ANY HOURS MISSED FOR PUBLIC HOLIDAYS ARE ACCOUNTED FOR++**

|  |  |
| --- | --- |
| **Activity** | **Hours** |
| Structured learning and teaching classes | +TAKE FROM ABOVE+ |
| Reading course materials | +NUMBER OF HOURS+ |
| Working on assignments | +NUMBER OF HOURS+ |
| Preparation for assessments | +NUMBER OF HOURS+ |
| +Anything else which is needed for studying this course+ |  |
| Examination  **++Remove row if no examination++** | +NUMBER OF HOURS+ |
| TOTAL | +TOTAL HOURS+  **++Ensure the total matches the sum of the above hours++** |

## Course Content

**++COPY THE CONTENT/TOPICS FROM THE COURSE DESCRIPTOR++**

**++FOR TRIMESTER-BASED COURSES++**

|  |  |  |
| --- | --- | --- |
| **Week #**  **Starting** | **Session** | **Content** |
| Week 1  +DATE+ | 1  2 | +Topic+ |
| Week 2  +DATE+ | 3  4 | +Topic+ |
| Week 3  +DATE+ | 5  6 | +Topic+ |
| Week 4  +DATE+ | 7  8 | +Topic+ |
| Week 5  +DATE+ | 9  10 | +Topic+ |
| Week 6  +DATE+ | 11  12 | +Topic+ |
| Week 7  +DATE+ | 13  14 | +Topic+ |
| Week 8  +DATE+ | 15  16 | +Topic+ |
| Week 9  +DATE+ | 17  18 | +Topic+ |
| Week 10  +DATE+ | 19  20 | +Topic+ |
| Week 11  +DATE+ | 21  22 | +Topic+ |
| Week 12  +DATE+ | 23  24 | +Topic+ |
| Week 13  +DATE+ | **+25**  **26+** | **+Examination Week+ ++OR++** +Topic+ |
| Week 14  +DATE+ | **+27**  **28+** | **+Examination Week+ ++OR++** +Topic+ |

The dates following week numbers are for the Monday of that week.

+The following is a public holiday and there will be no classes or assessments on that day:+

**++OR++**

+The following are public holidays and there will be no classes or assessments on these days:+

* +ENTER PUBLIC HOLIDAY HERE (Day, date, holiday name), ONE PER LINE+

**++FOR BA COURSES++**

**Content**

**A: XX**

**B: XX**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Date** | **Content / Activity** | **Lecturer** |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |

**Note: The above schedule is provided as a general guide and may be subject to minor variation.**

## Readings and Resources

**++REMOVE THE FOLLOWING IF NOT USING e-BOOKS, OR USING e-LEARNING TO DISTRIBUTE TEXTS++**

+Your textbook will be issued in e-book format, not as a hard copy. You will receive instructions for using a code to download your e-book onto your device. **Please note that e-books, once downloaded, cannot be returned.** If there is any possibility that you might change your course, do not download the e-book; wait until you have made your final course selection decisions for the trimester before downloading any e-books. If you download the e-book for a course, and then withdraw from the course, you will be required to pay extra for the e-book for the new course.+

**Online Learning Management System**

The AIS learning management system is Moodle which can be accessed at the following address: <http://moodle.ais.ac.nz/>

Moodle is one of the ways AIS optimises your learning experience. It is a platform where you can manage your learning. Please take the time to familiarise yourself with each section of Moodle so that you feel comfortable navigating yourself around. Teaching materials and assessments are all normally distributed via Moodle. You should access Moodle before, and routinely throughout, your course.

**Prescribed text(s) ++Remove if no prescribed text++**

+Reference using APA 7th referencing+

**Recommended reading(s)**

+Reference using APA 7th referencing+

**Resources**

+Reference using APA 7th referencing+

**Previous Examination Papers**

Previous examination papers can be accessed in Moodle [Library Resources]. A review of these past examinations may help you in preparing for your assessments. Please take into account any changes in course content, lecturer, etc.

## Course AssessmentS

The assessments for this course are as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Title** | **Course Marks %** | **Release Date** | **Due date** | **Learning Outcomes** | **Corresponding Course Content** |
| Assignment 1 | 15% | +DATE+ | +DATE+ | 1, 2, 3, 4, 7 | +CLASS#+ |
| Mid-Semester Test | 20% | +DATE+ | +DATE+ | 1, 2, 3, 4, 5 | +CLASS#+ |
| Assignment 2 | 15% | +DATE+ | +DATE+ | 1, 2, 3, 4, 5, 6, 7 | +CLASS#+ |
| Examination | 50% | Examination date TBA | | 1, 2, 3, 4, 5, 6 |  |
| Total | 100% |  |  |  |  |

Submission of written assignments are made through the submission boxes in Moodle.

You have the option of submitting written assessments as draft submissions to check for similarity matches prior to making final submissions. The draft submission option closes 24 hours prior to the due date and cannot be extended. You will not be able to submit your assessment unless you have attended APA Referencing Skills and Avoiding Plagiarism workshops and passed the Good Referencing Test (GRT).

**++ REMOVE IF NO EXAMINATION/S++**

+The examination is XX hours in duration.+

+The practical examination in week XX is XX hours in duration.+

**Passing Requirements**

+You must gain at least XX% in the +NAME OF ASSESSMENT+ assessment, and an overall mark of 50% or higher, to pass this course.+

**++OR++**

+You must gain an overall mark of 50% or higher to pass this course.+

## late Submission Of assignments

The due date(s) are as stated above. Any assignment submitted late – after 4.00pm on the due date for submission, or approved extension date – is subject to a 5% deduction of the available marks from the marks awarded for each successive 24-hour period (or part period) that has elapsed, and will receive a mark of zero if submitted after 96 hours have elapsed. If you have concerns about your ability to meet a deadline, you are advised to +consult with your lecturer before the due date.+ **++OR++** +contact the BA office for advice on an extension.+

See the guidelines for your programme in the AIS Student Handbook for more details should you require an assignment extension.

## Learning Support

Studying at this level requires awareness and understanding of academic requirements which can be, at times, difficult to comprehend. Several support options are available:

1. Consult with your course lecturer, either in person, via e-mail, or via Moodle
2. Contact the Learning Hub for appropriate support (learninghub@ais.ac.nz)
3. Contact the library (ais-library@ais.ac.nz)
4. Contact the **++Choose the appropriate person for your programme++**

+Director, Business Administration+

+Head of School, Business, Hospitality and Tourism+

+Head of School, Information Technology+

1. Contact your class representative

Please refer to the AIS Student Handbook for other support services that are available. The handbook can be found on the AIS website (www.ais.ac.nz).

All materials within the workbook and on Moodle are copied under the AIS Copyright Licence and Print Media Licence. Copied material has been copied solely for the educational purpose of AIS. Please use the materials for your own use in this course.

Recorded lessons will be posted on Moodle for your personal use only and are not for redistribution.

It is not acceptable for students to record lessons without the full knowledge of all the people in the classroom. Please ask permission before recording classes. Provided it is reasonable, permission will normally be given.

We recommend that you retain your course outlines for future reference as they are subject to modification.

Demonstrate an understanding of text file operation (reading/writing) and develop the appropriate program code for such operation including exception handling and data validation.

Develop workplace soft-skills including working in groups, writing formal reports, carrying out individual research and/or delivering oral presentations