

## Unit of Study: BIS2002 Systems Analysis and Design

### Overview:

This unit studies the techniques, tools and methods of systems analysis in a business environment. It aims to assist students to develop analytical skills in information requirements analysis, problem identification, feasibility assessment, data modelling, use case analysis, specifications, and sociotechnical issues of the systems development life cycle.

Students will learn user-centred design and task-centred design are fundamental to good systems design. To understand these concepts, students will study how to determine user requirements, and demonstrate that understanding through designing web-interfaces. Through case studies and practical examples, students will study the phases in the systems development life cycle (determining the user requirements, developing a systems proposal, designing the system) and apply the key principles to the implementation of system development problems in organisations. The organisational context of systems analysis and design and the iterative nature of the analysis and design process will also be explored.

<b>Course(s)</b>	Bachelor of Business Information Systems Bachelor of Information Technology
<b>Credit Points</b>	6 credit points
<b>Duration</b>	12 weeks (10 teaching weeks; 1 revision week; 1 final assessment week)
<b>Level</b>	Undergraduate Intermediate
<b>Student Workload</b>	Students should expect to spend approximately 10 hours per week over 12 weeks (totalling approximately 120 hours) on learning activities for this unit.
<b>Mode(s) of Delivery</b>	Online, Blended
<b>Pre-Requisites</b>	BIS1001 Foundations of Information Systems
<b>Unit Coordinator</b>	As per current <a href="#">timetable</a>
<b>Contact Information</b>	Consultation: 1 hour scheduled session

### Unit Learning Outcomes

On successful completion of this unit, students will be able to:

- ULO-1: Describe the core processes involved in the System Development Life Cycle (SDLC) for a computer-based information system.
- ULO-2: Compare and evaluate alternative methodologies used in developing business information systems.
- ULO-3: Adapt skills to model and design logical and physical systems using a variety of tools, techniques and methods.
- ULO-4: Apply UML notation and modelling to the analysis and design of business information systems.
- ULO-5: Describe testing procedures, deployment, and maintenance with reference to contemporary IT standards and frameworks.

## Weekly Schedule

Detailed information for each week's activities can be found on Unit's Weekly Modules in Canvas.

Week	Topic
Week 1	An Overview of Systems Analysis and Design
Week 2	Role of System Analyst Job prospects & Project Planning and Project Management (Part I)
Week 3	Project Planning and Project Management (Part II)
Week 4	Project Management Techniques & Investigating System Requirements (Part I)
Week 5	Investigating System Requirements (Part II) & Modelling (Use case)
Week 6	Modelling (Domain Classes)
Week 7	Sequence Diagram, Activity Diagram
Week 8	Defining the System Architecture & Designing the User Interface (Part I)
Week 9	Designing the User Interface (Part II)
Week 10	Deploying the New System
Week 11	Revision
Week 12	FINAL ASSESSMENT

## Assessments





- All assessments are compulsory.
- To pass the unit students must:
  - achieve a total of 50% or more of marks offered; and
  - pass all individual invigilated assessments; and
  - have attempted all assessments.

Where one or more of these requirements are not met, the Board of Examiners will consider a student's overall progress towards meeting the unit learning outcomes and any special circumstances before reaching a decision.

- The Board of Examiners may grant a supplementary assessment where a student:
  - achieves a total of 45% or more; and
  - has passed all individual invigilated assessments in the unit; and
  - has attempted all assessments; and
  - has a recommendation for supplementary assessment by the Unit Coordinator and the Head of Discipline.

Where one or more of these requirements are not met, the Board of Examiners will consider a student's overall progress towards meeting the unit learning outcomes and any special circumstances before reaching a decision. Attendance and engagement in class will be considered.

- APIC awards common result grades as set out in the [Award of Grade Policy](#).
- Detailed information for each assessment can be found on the Unit's Home Page and in the Assessment Brief.

Assessment Task	Type	Weighting	Length	Due	ULOs Assessed
<b>Assessment 1: Case Study -1</b> Covers the following topics Systems Development Life Cycle (SDLC), Work Breakdown Structure (WBS), PERT/CPM chart, NPV, ROI and payback period	Group  Max 3 students	30%	3000 words	Week 5	ULO1 ULO2 ULO3
<b>Assessment 2: Case Study -2</b> Covers the following topics: use case diagram, ER diagram Class diagram, Sequence diagram, Activity diagram, user and system interfaces, and system testing, deployment, and maintenance	Individual 	30%	2500 words	Week 12	ULO1 ULO2 ULO3 ULO4
<b>Assessment 3: Project Design</b> Every two weeks exercises assess students' ability to understand theoretical materials	Individual  Invigilated 	40%	Equiv. 2500 words	Weeks 2, 4, 6, 8, 10	ULO1 ULO2 ULO3 ULO4 ULO5

equiv. – equivalent word count based on the Assessment Load Equivalence Guide. It means this assessment is equivalent to the normally expected time requirement for a written submission containing the specified number of words.

### Course Reserve

Course Reserve includes all required resources and reading material for the unit of study. You can access Course Reserve via [APIC Library](#) or via the Course Reserve link on the unit's homepage.

### Prescribed text(s):

Satzinger, JW, Jackson, RB & Burd, SD 2016, *Systems analysis and design in a changing world*, 7th edn, Cengage Learning, Boston, Massachusetts.

### Other Recommended Resources:

Harvard Business Review: [www.hbr.org](http://www.hbr.org)

### Academic integrity

Ethical conduct and academic integrity and honesty are fundamental to the mission of APIC and academic misconduct will not be tolerated by the College. It is the responsibility of every student to make sure that they understand what constitutes academic misconduct and to refrain from engaging in it. Please refer to APIC's [Academic Integrity Policy](#) for further details.

## Other Important Information and Links

<p><b>Special consideration</b></p> <p>If your academic work is impacted by significant documented illness, hardship, or other adverse circumstances beyond your control, you may make an application for Special Consideration. Please refer to the <a href="#">Assessment Policy</a> for further details.</p>	<p><b>Late submission</b></p> <p>Penalties apply when work is submitted after the due date without approval. Please refer to the <a href="#">Assessment Policy</a> for information about late submission.</p>
<p><b>Assessment appeals</b></p> <p>If you are concerned about a mark you have received for an assessment or final grade, you may apply to formally appeal the grade. Please see the <a href="#">Assessment Policy</a> for further details.</p>	<p><b>Award of grades</b></p> <p>APIC awards common result grades, set out in the <a href="#">Award of Grade Policy</a>.</p>
<p><b>Expectations of student conduct</b></p> <p>Students are expected to conduct themselves in a manner that is consistent with a safe and respectful study environment. More information can be found in the <a href="#">Student Code of Conduct</a>.</p>	<p><b>Study resources</b></p> <p>APIC Library and Student Learning Support resources and services can be accessed via the <a href="#">Student Lounge</a> or your <a href="#">Dashboard on the OLS (Canvas)</a>.</p>
<p><b>Student Services</b></p> <p>The Student Services team provides administrative support for students and handles enquiries about enrolment, timetables, important dates and submitting forms. More information can be found on the <a href="#">Student Services page on the OLS (Canvas)</a>.</p>	<p><b>Key dates</b></p> <p>Key dates through the academic year, including teaching periods, census, payment deadlines and exams can be found on the <a href="#">Academic Calendar</a> section of the APIC website.</p>

## Changes and Updates to the Unit of Study Guide

This Unit of Study Guide may be updated and amended from time to time. Students will be notified of any changes to the unit via the Online Learning System (Canvas) space for the unit.

This Unit of Study Guide was last modified on 21<sup>st</sup> Jan 2023.