

# Course Outline (Higher Education)

**Institute / School:** Global Professional School

**Course Title:** IT PROBLEM SOLVING

**Course ID:** GPSIT1101

**Credit Points:** 15.00

**Prerequisite(s):** Nil

**Co-requisite(s):** Nil

**Exclusion(s):** Nil

**ASCED:** 020109

**Description of the Course:**

This course introduces students to the fundamental techniques and strategies involved with problem solving, with an emphasis on analysing and resolving IT problems in particular. Students are expected to develop a sound methodological approach to problem solving that will equip them to resolve problems fundamental to the IT industry. Key to this process is developing confidence, resilience and perseverance in identifying multiple potential solutions to problems individually and in team-based environments. Also to evaluate which solutions may be most appropriate to the problems encountered. This course will incorporate additional learning hours to support the development of students' academic and study skills.

**Grade Scheme:** Graded (HD, D, C, P, MF, F, XF)

**Work Experience:**

No work experience: Student is not undertaking work experience in industry.

**Does Recognition of Prior Learning apply to this course?** No

**Placement Component:** No

**Supplementary Assessment:** Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

**Program Level:**

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory	✓					
Intermediate						
Advanced						

**Learning Outcomes:**
**Knowledge:**

- K1.** Explain, compare, and contrast fundamental strategies for problem solving
- K2.** Relate goal-setting and plan formulation to problem solving
- K3.** Describe tools and techniques that can be used to model and describe problems
- K4.** Investigate the value of reflection, collaboration, attitude and self-efficacy towards success in problem solving
- K5.** Show an understanding of the norms involved with collaboration and team work

**Skills:**

- S1.** Decompose a problem and create goals and plans to solve that problem
- S2.** Devise and implement problem solving strategies which can be applied to a range of IT problems
- S3.** Develop and verify algorithms based on conceptual models used in programming
- S4.** Construct documentation describing how to solve a problem
- S5.** Develop the appropriate English language and academic skills to successfully study at an undergraduate level

**Application of knowledge and skills:**

- A1.** Apply problem solving strategies, tools and techniques to solve problems in a variety of domains

**Course Content:**

Topics may include:

- Fundamentals of problem solving
- Problem solving strategies and their application
- Goal setting and plan formulation
- Collaboration and team work
- Understanding feedback and evaluating potential solutions
- Critical thinking
- Design thinking
- Reading and writing documentation
- Data and data storage
- UML Modelling and problem solving
- Innovations in computing

**Graduate Attributes**

The Federation University Federation graduate attributes (GA) are entrenched in the [Higher Education Graduate Attributes Policy](#) (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1, K2, K3, K4, K5, S1, S2, S3, S4, A1.	AT 1- 2
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	K1, K2, K5, S1, S2, A1	AT 1- 2
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	S2, A1	AT 1- 2
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	K1, K4, S1, S3, S4, S5	AT 1- 2
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	K2, K3, K5 & S2	AT 1- 2

### Learning Task and Assessment:

Assessment for this course will be based on a number of tasks including a lecture / practical test or presentation, written portfolio of work, practical assignments, and an end of semester test/exam sampling content from throughout the course.

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, K3, K4, K5, S1, S2, S3, S4, S5, A1	Apply various problem solving processes and reflect on the thinking skills and processes used.	Learning journal	20%-30%
K1, K2, K3, S1, S2, S5, A1	Application of theoretical concepts covered to explain and solve problems	Problem Solving Exercise(s)	10%-20%
K2, K3, K4, K5, S1, S2, S3, S4, S5, A1	Plan and comprehensively solve IT problem(s).	Practical Assignment(s)/Oral Presentation(s)	40%-50%
K1, K2, K3, K4, K5, S1, S2, S5, A1	Plan and comprehensively solve IT problem(s).	Final Test/Exam	20%-30%

### Alignment to the Minimum Co-Operative Standards (MiCS)

The Minimum Co-Operative Standards (MiCS) are an integral part of the Co-Operative University Model. Seven

criteria inform the MiCS alignment at a program level. Although courses must undertake MiCS mapping, there is NO expectation that courses will meet all seven criteria. The criteria are as follows:

1. Co-design with industry and students
2. Co-develop with industry and students
3. Co-deliver with industry
4. FedTASK alignment
5. Workplace learning and career preparation
6. Authentic assessment
7. Industry-link/Industry facing experience

MiCS program level reporting highlights how each program embraces the principals and practices associated with the Co-Operative Model. Evidence of program alignment with the MiCS, can be captured in the Program Modification Form.

**MICS Mapping has been undertaken for this course** No

Date:

**Adopted Reference Style:**

APA

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)