

Course Outline (Higher Education)

Institute / School: Institute of Innovation, Science & Sustainability

Course Title: CHEMISTRY FOR HEALTH & NUTRITION

Course ID: SCCHM1000

Credit Points: 15.00

Prerequisite(s): Nil

Co-requisite(s): Nil

Exclusion(s): Nil

ASCED: 010501

Description of the Course:

SCCHM1000 is an introductory chemistry course with a focus on chemistry concepts relevant to health and nutrition. The focus of this course is on understanding the language of chemistry and understanding the importance of chemical concepts in a food context. The forces that stabilise biological molecules will be investigated, along with the important role of water as a solvent in biological systems. Factors affecting rates of reactions will be explored, as will key concepts such as equilibria and pH. Organic and inorganic chemistry concepts will lead to an understanding of biologically significant classes of food molecules such as carbohydrates, lipids and proteins, as well as bioinorganic molecules, such as haemoglobin and enzymes.

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.** Recognize and use the language of chemistry and chemical representations in general as well as in food and health contexts
- K2.** Describe the formation, composition and properties of chemical species, as well as their behavior in water
- K3.** Classify and describe biologically significant classes of organic and inorganic compounds and outline those relevant to food and health

Skills:

- S1.** Write and interpret chemical representations and formulas
- S2.** Use a problem-solving approach to investigate relationships in chemical reactions
- S3.** Communicate effectively and accurately using appropriate chemical terminology

Application of knowledge and skills:

- A1.** Apply theoretical knowledge of chemical concepts to solve problems and communicate findings in areas of health and nutrition

Course Content:

This course focuses on introductory chemical concepts that are relevant to studies in health and nutrition. Topics in this course may include:

- The language of chemistry and the relevance of chemistry in health and nutrition
- Maths and measurement in chemistry
- Chemical formulas and representations
- States of matter and intermolecular forces
- Water as a solvent
- Thermochemistry, chemical kinetics, and chemical equilibria
- Functional groups and the structure of organic molecules
- Structures of biologically significant classes of organic and inorganic compounds

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.	A1	AT2
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.	Not applicable	Not applicable
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.	Not applicable	Not applicable
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-K3, S1, S3, A1	AT2, AT3
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.	Not applicable	Not applicable

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1-K3, S1-S3, A1	Apply chemical concepts to solve simple problems and demonstrate problem-solving skills developed during the course	Online quizzes	20-30%
K1-K3, S1-S3, A1	Apply chemical concepts to online activity(s), including recording and interpreting results and observations and communicating these in appropriate scientific formats	Scientific presentation(s)	20-40%
K1-K3, S1-S3, A1	Demonstrate understanding of the main concepts presented in the course material and apply concepts to problems and examples.	Test(s)	40-50%

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:

Australian Harvard

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

Fed Cite - [referencing tool](#)