

EPHLTH 170: Science Essentials for Nursing and Midwifery

Online

Semester 1 - 2024



The Pathways and Academic Learning Support Centre recognises and respects the unique history and culture of Aboriginal and Torres Strait Islander peoples and their unbroken relationship with the lands and the waters of Australia over millennia. We are dedicated to reconciliation and to offering opportunities for Aboriginal and Torres Strait Islander peoples to access and succeed in higher education. The Centre is committed to providing a culturally safe and inclusive environment for all.

OVERVIEW

Course Description This course will introduce students to basic mathematics, biochemistry, anatomy, and physiology of the human body relevant to studies in the health sciences. Using relevant examples, students will understand how these theoretical concepts underpin the science informing nursing practice and interventions. Topics will cover a range of processes that are important to the maintenance of life and some of the medical methods used to measure and understand these.

Academic Progress Requirements

Nil

Requisites

If you have successfully completed, or are enrolled in EPBIOL259, EPCHEM314 or EPHLTH370 you cannot enrol in this course.

Contact Hours

Self-Directed Learning

Self-Directed
2 hour(s) per week(s) for 12 week(s) starting Week 1
Self-Directed learning is equivalent to face-to-face contact hours. It involves engagement with course materials that are delivered at a time that suits you via short videos, course notes, podcasts, readings and other activities.

Tutorial

Online
1 hour(s) per week(s) for 12 week(s) starting Week 1

Unit Weighting

10

Workload

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

COURSE OUTLINE

CONTACTS

Course Coordinator	Consultation: Please email to schedule an appointment.	
Teaching Staff	Other teaching staff will be advised on the course Canvas site.	
School Office	Callaghan Ground Floor, General Purpose Building (GP) Ph: 02 4921 5558 enabling@newcastle.edu.au	Ourimbah HO 168, Humanities Building Ph: 02 4348 4076 enabling@newcastle.edu.au

SYLLABUS

Course Content	<ul style="list-style-type: none">• Homeostasis• The cellular basis of life• Levels of cellular organisation• Introduction to biological chemistry (atoms, molecules, biological compounds, bonding, chemical reactions)• Mathematics - measurement, SI units, rates and ratios• Concentration, osmosis and diffusion• Digestive system• Urinary system
Course Learning Outcomes	<p>On successful completion of this course, students will be able to:</p> <ol style="list-style-type: none">1. Use their knowledge, skills and understanding of key scientific concepts relevant to the health sciences to explain basic health related problems.2. Conduct research relevant to understanding the science behind nursing practice and interventions.3. Make accurate measurements and calculations in a nursing context.4. Work effectively, both individually and in groups, to solve problems.5. Communicate their scientific knowledge in both oral and written formats using conventions appropriate for the health sciences.
Course Materials	All course materials will be provided on the course Canvas site. Students are not required to purchase a textbook.

SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	26 Feb	Introduction to University; Homeostasis; Medical Terminology and Directional Terms	Introduction and Skills for studying	
2	4 Mar	Levels of Cellular Organisation and body systems.	Homeostasis and medical terminology	
3	11 Mar	Cellular Basis of Life, Group work	Library and referencing	Online quiz 1 Sunday 17 th March 11:59pm
4	18 Mar	Basic maths skill, scientific notation and SI units	Tissues, directional terms and cells Mid-semester test information	
5	25 Mar	Introduction to Chemistry, matter and atomic structure	Maths Group work	Online quiz 2 Sunday 31 st March 11:59pm
6	1 Apr	Bonding and compounds	Group work presentations	Group presentations Sunday 7 th April 11:59pm
7	8 Apr	Research report, academic integrity and referencing	Chemistry, bonding and compounds	Mid semester test Friday 12 th April 11:59pm Online quiz 3 Sunday 14 th April 11:59pm
Recess				
Recess				
8	29 Apr	Organic chemistry, biological molecules and chemical reactions	Academic integrity	
9	6 May	Digestive System	Organic chemistry and chemical reactions	Research assessment Sunday 12 th May 11:59pm Online Quiz 4 Sunday 12 th May 11:59pm
10	13 May	Energy and the body Biochemistry	Digestive System	
11	20 May	Urinary System	Biochemistry	Quiz 5 Sunday 26 th May 11:59pm
12	27 May	Concentration: fluid regulation in the body	Urinary system and concentration	
13	3 Jun	Virtual Laboratory Sessions		Quiz 6 Sunday 9 th June 11:59pm Laboratory Report Sunday 9 th June 11:59pm
Examination Period				
Examination Period				

ASSESSMENTS

This course has 6 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Online Quizzes	Sunday 11:59pm Weeks 3, 5, 7, 9, 11, 13	Individual	10%	1, 3, 4, 5
2	Group Presentation	Sunday 7 th April 11:59pm	Group	5%	1, 2, 3, 4, 5
3	In Term Test	Friday 12 th April 11:59pm	Individual	10%	1, 3, 4, 5
4	Written Assignment	Sunday 12 th May 11:59pm	Individual	20%	1, 2, 4, 5
5	Final Examination	During the Examination Period	Individual	50%	1, 3, 4, 5
6	Tutorial/Laboratory Exercises	Sunday 9 th June 11:59pm	Individual	5%	2, 3, 4

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 5% 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 - Online Quizzes

Assessment Type Description

Quiz
Six (6) on-line quizzes will be completed via Canvas. The best five (5) results will contribute a total of 10% to your final mark. The on-line quizzes will cover the topics listed in the table below. Each quiz consists of 10 questions based on material contained in the previous weeks lectures, tutorials and textbook readings. Quizzes will become available at 12:00am on Monday and close at 11:59pm Sunday on the dates shown in the table below. Each quiz must be completed in 20 minutes and can be attempted twice. The highest mark will be recorded.

Weighting

10%

Due Date

Sundays 11:59pm Weeks 3, 5, 7, 9, 11, 13

Submission Method

Online

Assessment Criteria

Correct answers

Return Method

Online

Feedback Provided

Feedback will be provided on Canvas

Assessment 2 - Group Presentation

Assessment Type Description

Presentation
Students will work in a small group to complete and present a case study on one of the following health conditions: cystic fibrosis, diabetes, familial hypercholesterolemia, phenylketonuria or Tay-sachs.

For this assessment students will be required to submit and present group work. The group work will be assessed and will contribute to a student's final mark for this assessment.

Students will be able to self-enrol into their chosen group. Disputes arising within groups will be dealt with according to the guidelines issued in the tutorial. It is expected that students will attempt to resolve difficulties within their group using the provided guidelines before approaching the Course Coordinator for help.

Each group will produce six (6) PowerPoint slides and a 10 minute presentation to be submitted and presented in Week 6. Students will be provided with time during tutorial sessions to work on the assignment where possible. Further details for this assessment will be provided in Week 3.

Weighting

5%

Due Date

Sunday 7th April 11:59pm

Submission Method

Online and in class

Assessment Criteria

Rubric provided on Canvas

Return Method

Online

Feedback Provided

Feedback will be provided on Canvas

Assessment 3 - Mid-Semester Class Test

Assessment Type	In Term Test
Description	The 60 minute mid-semester in-term test will be held online and will assess a student's learning of all course material covered in lectures, tutorials and readings from Weeks 1 - 6. The test will be multiple choice.
Weighting	10%
Due Date	Friday 12 th April 11:59pm
Submission Method	Online
Assessment Criteria	Correct answers
Return Method	Not returned
Feedback Provided	Feedback will be provided on Canvas

Assessment 4 - Research Assignment

Assessment Type	Written Assignment
Description	Each student will individually continue researching the medical condition allocated to their group for Assessment 2. The assignment will involve the preparation of a 1500 word structured research report. The first half of the report will be prepared in a style that is suitable for an audience comprising other health professionals, including doctors. The second half of the report will be prepared using language appropriate for conveying information about the allocated condition to a patient or patient's relatives affected by the condition. Further information will be given out in Week 7. Marking criteria and example research reports will be available under the "Assignment" button on the Course menu in Canvas. It is strongly suggested you begin researching your allocated condition in Week 7. Students should aim to have their reports written on the weekend prior to submission. Prior to submission, the research assignment MUST be submitted to TURNITIN, to check for inadvertent plagiarism. Information about TURNITIN can be found at the following link: http://www.newcastle.edu.au/unit/centre-for-teaching-and-learning/uonline/turnitin-for-students.html
Weighting	20%
Due Date	Sunday 12 th May 11:59pm
Submission Method	Online
Assessment Criteria	Rubric provided on Canvas
Return Method	Online
Feedback Provided	Feedback will be provided on Canvas

Assessment 5 – Final Examination

Assessment Type	Formal Examination
Description	Your final examination is a 2-hour formal examination that will be held in the University Examination Period. This is an open book exam. The examination will be based on ALL material covered in lectures, tutorials, readings and course notes for the duration of the course and will consist of multiple-choice questions. You will be given more information about this examination later in the course.
Weighting	50%
Due Date	Examination Period
Submission Method	Online
Assessment Criteria	Correct answers
Return Method	This assessment will not be returned
Feedback Provided	No feedback will be provided for this assessment

Assessment 6 – Laboratory Report

Assessment Type	Tutorial/Laboratory Exercises
Description	Students will complete the laboratory report at home using the template and online resources provided. Practical activities are related to theory taught during the course. Further details will be provided before Week 13.
Weighting	5%
Due Date	Sunday 9 th June 11:59pm
Submission Method	Online
Assessment Criteria	Rubric will be provided on Canvas
Return Method	Online
Feedback Provided	Feedback will be provided on Canvas

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (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.

Communication Methods

Email is the principal form of communication at the university and within this course. Always use your student email (NUmail), rather than a private email address, and check this regularly. As Course Coordinator I will try to respond to your email within three (3) working days. I will not normally respond to emails over the weekends. Please be courteous in your email communication and in the online space.

Canvas is used to distribute course material, announcements and other information. It is also used for online quizzes and to allow students to track their individual progressive assessment results throughout the semester via Grades.

Discussions forums in Canvas can be used to ask questions about minor issues. Students are strongly encouraged to use these to communicate with each other, discuss issues relating to the course, and solve minor problems.

Attendance and Engagement

In addition to face-to-face hours in class, out-of-class study and related work will require an additional commitment of up to 10 hours per week of reading, preparation, and study time over the semester. Students are required to spend on average 120-140 hours of effort (contact and non-contact hours including assessment) per semester per 10 unit course.

To maximise your learning opportunities, you should read all relevant material prior to attending class.

It is strongly recommended that you attend your classes every week. Our data shows that you will get better results if you attend class with your peers. If you do have to miss a class, you should catch up on any missed work by accessing lecture recordings if you are enrolled face-to-face. While online tutorials are recorded, on-campus tutorials are not, so you should view other resources available on your Canvas site and contact your course coordinator if you would like advice on how to best catch up on any material that was missed. **If you are unable to attend classes regularly you should reach out to your course coordinator as soon as possible to discuss ways that you can continue to engage with the learning material.**

A plan of regular revision throughout the semester is also strongly recommended to help you manage your time, consolidate information and retain that knowledge for the duration of the

course and beyond.

Assessment items have been designed to reinforce and revise the course material, and ensure you are up to date with course content. You are required to submit all assessable items by the due dates unless prior arrangements have been made.

Additional Contact Details

If you have any questions about your course, please speak with your course coordinator, lecturer or tutor first. For general enquiries, please contact the Pathways and Academic Learning Support Centre Office or your Student Liaison Officer. Contact details for both the office and Student Liaison Officers can be found [here](#).

Yapug students can also contact your Indigenous Enabling Learning Advisor [Hannah Pipe](#) or your Program Convenor [Dan Collins](#).

Final Examination

This course has a formal examination. All formal examinations will be held during the [University's Examination Period](#). Your [exam timetable](#) will be available approximately 4 weeks before the exam period and you must ensure that you are available to undertake your exam at any time during the Examination Period.

If you are unable to attend a scheduled examination due to illness or you have another significant, verifiable reason, contact the Pathways and Academic Learning Support Office and advise your lecturer at the earliest opportunity. Completion of an [online Adverse Circumstances application](#) including appropriate documentation is required.

If you have a permanent or temporary disability or medical condition that means you may need adjustments made during your examination, you must register with [AccessAbility](#) at the start of semester so that these arrangements can be made.

If you have a Reasonable Adjustment Plan (RAP), your examination will be scheduled in accordance with it. If you are unable to attend your scheduled examination due to illness or other circumstance, you will need to submit an online Adverse Circumstances application and supply appropriate documentation to support your application. Your RAP is not able to be used as your documentation.

Adverse Circumstances

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 Adverse Circumstances must be lodged via the online Adverse Circumstances system for all individual assessment items worth 30% or greater **by 11:00pm on the day the assessment is due**. For assessment items less than 30%, you will need to contact your Course Coordinator by 11:00pm on the due date of the assessment item.

Before applying you must refer to the [Adverse Circumstances Affecting Assessment Items Procedure](#) and the [Adverse Circumstances Affecting Assessment Items Policy](#).

Please note that students must submit their adverse circumstances application via the online Adverse Circumstances system by 11:00pm on the due date of the assessment item, even if you are using a [Reasonable Adjustment Plan \(RAP\)](#) as your supporting documentation.

Written Assessment Word Limits

If this course includes written assessments, the word limit listed will include headings, sub-heading, in-text citations, quotes and referencing but does not include the list of references, appendices and footnotes. You will not receive a penalty for exceeding the word limit (there is a tolerance of up to 10%), but any work after the maximum word limit may not be included within the allocation of marks.

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. Please refer to the [Student Academic Integrity Policy](#).

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 [Oral Examination \(viva\) Procedure](#). 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 [Student Conduct Rule](#).

Workplace Health and Safety Requirements

There are no specific WH&S requirements for this course.

Software

Free Microsoft Office software is available to enrolled students [here](#) and includes 5 TB of free cloud storage with OneDrive.

Timetable

Your timetable for this course is available via the myUni Student Portal and can also be found [here](#).

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.

Important Policy 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](#) that support a safe and respectful environment at the University.

This course outline was approved by the Director, PALS. No alteration of this course outline is permitted without Director 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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