UNSW Course Outline

HDAT9400 Management and Curation of Health Data - 2024

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General Course Information

Course Code : HDAT9400
Year : 2024
Term : Term 2
Teaching Period : T2
Is a multi-term course? : No
Faculty : Faculty of Medicine and Health
Academic Unit : School of Biomedical Sciences
Delivery Mode : Online
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate, Postgraduate
Units of Credit : 6

<u>Useful Links</u>

<u>Handbook</u> <u>Class Timetable</u>

Course Details & Outcomes

Course Description

This course is designed to equip you with the skills required to collect or obtain data, design data management strategies aligned with best practice, and appreciate the day to day practicalities of data curation for sound data management. You will develop data wrangling skills required to

assemble data suitable for analysis and research purposes, including data from linkage projects. Data wrangling skills will focus on the key areas of data security, data exploration, documentation of data (for example data dictionaries) and data management, with the ultimate aim of creating analysis-ready datasets and ensuring reproducible results.

Course Aims

The course will support you to reach proficiency in the ethical and legal issues relating to use of health data, as well as the appropriate data management practices in accordance with responsible conduct of research. The course has a strong focus on the practical component involving exploration and documentation of data quality, data management practices, creation of analysis ready datasets and ensuring research reproducibility.

Relationship to Other Courses

If you are unsure how this course fits within your program, you can seek guidance on optimising your program structure from staff at the Nucleus Student Hub or by contacting Health Data Science team via MScHDS@unsw.edu.au.

- Progression plans for UNSW Medicine and Health programs can be found on the UNSW Medicine & Health website.

HDAT9400 is a core corse for GCert, GDip, MSc HDS and MSC HDS (Ext) postgraduate programs. To see how this course fits into your overall Health Data Science program, please see this guided UNSW CBDRH tutorial.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Apply the concepts of confidentiality, privacy and security in managing health data.
CLO2 : Design (and document) data management plans involving data dictionaries and generation of metadata.
CLO3 : Evaluate data quality.
CLO4 : Discuss data linkage strategies and the process of applying for linked data.
CLO5 : Develop and implement data merging and cleaning rules involving linked data.
CLO6 : Generate syntax (code) required to produce analysis ready datasets.

Course Learning Outcomes	Assessment Item
CLO1 : Apply the concepts of confidentiality, privacy and security in managing health data.	• Quiz • Data management plan
CLO2 : Design (and document) data management plans involving data dictionaries and generation of metadata.	• Data cleaning • Quiz • Data management plan
CLO3 : Evaluate data quality.	• Data cleaning
CLO4 : Discuss data linkage strategies and the process of applying for linked data.	• Final assignment
CLO5 : Develop and implement data merging and cleaning rules involving linked data.	• Final assignment
CLO6 : Generate syntax (code) required to produce analysis ready datasets.	• Quiz • Data cleaning • Final assignment

Learning and Teaching Technologies

Open Learning - Learning Management System | Microsoft Teams

Learning and Teaching in this course

All course materials and course announcements are provided on the course learning management system, Open Learning.

Microsoft Teams will be used for online workhosps and recordings. You will be automatiacally added to the HDAT9400 T2 2024 Teams classroom, and will be sent a notification via your student email. Instructions on how to access Open Learning will be posted on Microsoft Teams during 0-week. All other course announcements will be made via Open Learning.

By accessing and using the ICT resources provided by UNSW, you are agreeing to abide by the 'Acceptable Use of UNSW ICT Resources' policy particularly on respect for intellectual property and copyright, legal and ethical use of ICT resources and security and privacy.

Additional Course Information

The Health Data Analytics (HDAT) courses are part of the Health Data Science Program taught by The Centre for Big Data Research in Health (CBDRH).

A selection of the Health Data Analytics (HDAT) courses are also incorporated into the Clinical Artificial Intelligence Program for Medical Honours students from UNSW.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Quiz Assessment Format: Individual	20%	Due Date: Week 2: 03 June - 09 June, Week 4: 17 June - 23 June
Data management plan Assessment Format: Group	20%	Due Date: Week 5: 24 June - 30 June
Data cleaning Assessment Format: Individual Short Extension: Yes (2 days)	20%	Due Date: Week 8: 15 July - 21 July
Final assignment Assessment Format: Individual Short Extension: Yes (2 days)	40%	Due Date: Week 11: 05 August - 11 August

Assessment Details
Quiz

Assessment Overview

During the early part of the course, you will complete summative assessments to help you reinforce learning of the course materials. The assessments will entail answering two multiple choice question (MCQ) quizzes of equal weight, in an open-book manner. Individual feedback on the MCQs will be available instantaneously after the due date.

Course Learning Outcomes

- CLO1 : Apply the concepts of confidentiality, privacy and security in managing health data.
- CLO2 : Design (and document) data management plans involving data dictionaries and generation of metadata.
- CLO6 : Generate syntax (code) required to produce analysis ready datasets.

Detailed Assessment Description

There will be two Quizzes of 10 questions each, due in Weeks 2 and 4 of the course. Detailed information about this assessment will be provided on the course Open Learning page.

Submission notes

Short extension & Special consideration: This task does NOT have a short extension option.

Assessment information

The Generative Artificial Intellience (AI) level for this assessment is SIMPLE EDITING ASSISTANCE.

For this assessment task, you may use AI-based software to research and prepare prior to completing your assessment.

Assignment submission Turnitin type

Not Applicable

Data management plan

Assessment Overview

This assignment will be in a format of a small research study project, positioned mid-way through the course. In this assessment, you will work as a group to apply your knowledge regarding construction of a data dictionary, metadata, data management plan (DMP) and issues of privacy and confidentiality based on the content covered in the first half of the course. You will be given a short research protocol and will be required to prepare a fully documented DMP with supporting documentation. Your grade will be determined by aggregating marks from both group and peer assessments. Your work will be assessed using a grading rubric, with group- and class-level feedback to be provided within 10 working days of submission.

Course Learning Outcomes

- CLO1 : Apply the concepts of confidentiality, privacy and security in managing health data.
- CLO2 : Design (and document) data management plans involving data dictionaries and generation of metadata.

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Open Learning page.

Submission notes

Short extension & Special consideration: This task does NOT have a short extension option.

Use of Generative Artificial Intelligence (AI) in the assessment is permitted for DRAFTING ASSISTANCE.

As this assessment task involves some planning or creative processes, you are permitted to use software to generate initial drafts. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e., what is generated by the software should not be a part of your final submission. It is a good idea to keep copies of your initial drafts to show your lecturer if there is any uncertainty about the originality of your work. Please note that your submission will be passed through an AI-text detection tool. If your marker has concerns that your answer contains passages of AI-generated text that have not been sufficiently modified you may be asked to explain your work, but we recognise that you are permitted to use AI generated text as a starting point and some traces may remain. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

Assignment submission Turnitin type

This is not a Turnitin assignment

Data cleaning

Assessment Overview

In this assessment, you will be provided with datasets, data dictionaries and a sample research scenario. You will develop, document and implement data cleaning notes and code/programs to aid reproducible research. This assignment is due after completion of the first half of the course.

The assignment is assessed via a rubric specifically designed for the assessment. You will be provided with written feedback on your statistical code and written submission within 10 working days of the submission.

Course Learning Outcomes

- CLO2 : Design (and document) data management plans involving data dictionaries and generation of metadata.
- CLO3 : Evaluate data quality.
- CLO6 : Generate syntax (code) required to produce analysis ready datasets.

Detailed Assessment Description

Detailed information about this assessment will be provided on the course Open Learning page.

<u>Submission notes</u>

Short extension & Special consideration: This task does have a short extension option. A short extension of 2 days is available for this task. See 3. Submission of Assessment Tasks in the Other Useful Information tab of your course outline and refer to Open Learning for additional submission information.

<u>Assessment information</u>

Use of Generative Artificial Intelligence (AI) in the assessment is permitted for SIMPLE EDITING ASSISTANCE. This means that you may use AI-based software to research and prepare prior to completing your assessment. You are permitted to use standard editing and referencing functions in word processing software, eg. including spelling and grammar checking, in the creation of your submission. Please keep a copy of your generative AI prompts, in case a marked ask you for evidence of originality of your work.

Please note that your submission will be passed through an AI-generated text detection tool. If the outputs of generative AI software (e.g ChatGPT, Copilot) form part of your submission, you will be asked to explain your understanding of your submission. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties which may include failing the assessment, 00FL grade for the course, suspension, or exclusion.

<u>Assignment submission Turnitin type</u>

This is not a Turnitin assignment

Final assignment

<u>Assessment Overview</u>

This assignment will be in a format of a research study project which includes linked data. You will be provided with two or more datasets and specific research questions. For this assignment, you will be creating analysis ready datasets, writing and documenting reproducible SAS code, interpreting code outputs and answering research questions. This assessment is due at the end of the course.

Feedback on your work will be provided via the learning management system at the end of the course.

<u>Course Learning Outcomes</u>

- CLO4 : Discuss data linkage strategies and the process of applying for linked data.

- CLO5 : Develop and implement data merging and cleaning rules involving linked data.
- CLO6 : Generate syntax (code) required to produce analysis ready datasets.

<u>Detailed Assessment Description</u>

Detailed information about this assessment will be provided on the course Open Learning page.

<u>Submission notes</u>

Short extension & Special consideration: This task does have a short extension option. A short extension of 2 days is available for this task. See 3. Submission of Assessment Tasks in the Other Useful Information tab of your course outline and refer to Open Learning for additional submission information.

<u>Assessment information</u>

Use of Generative Artificial Intelligence (AI) in the assessment is permitted for SIMPLE EDITING ASSISTANCE. This means that you may use AI-based software to research and prepare prior to completing your assessment. You are permitted to use standard editing and referencing functions in word processing software, eg. including spelling and grammar checking, in the creation of your submission. Please keep a copy of your generative AI prompts, in case a marked ask you for evidence of originality of your work.

Please note that your submission will be passed through an AI-generated text detection tool. If the outputs of generative AI software (e.g ChatGPT, Copilot) form part of your submission, you will be asked to explain your understanding of your submission. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties which may include failing the assessment, 00FL grade for the course, suspension, or exclusion.

<u>Assignment submission Turnitin type</u>

This is not a Turnitin assignment

General Assessment Information

Detailed instructions regarding assessments for this course are provided on the course learning management system.

For student information on results, grades, and guides to assessment see: https://student.unsw.edu.au/assessment

Referencing

You are encouraged to use Vancouver referencing style for assignments for this course. It is your responsibility to learn Vancouver referencing and use it consistently to acknowledge sources of information (citing references). Failure to reference correctly may limit marks to PS or below. Guidelines for acknowledging sources of information can be found on the following websites: ·

- UNSW Library: http://subjectguides.library.unsw.edu.au/elise
- UNSW Academic Skills and Support: https://student.unsw.edu.au/skills

Grading and feedback

You will be provided with feedback on your assignment via Open Learning. You will be marked according to the marking assessment criteria listed for that specific assessment task. Academic feedback on assessments goes beyond grading, helping you identify strengths, weaknesses, and guiding you on how to improve and progress in your studies and professional abilities. In addition to feedback, you will receive a mark that reflects the overall quality of the work you have submitted across the marking criteria. The marking criteria for assessments in this course are provided on Open Learning.

Grading Basis

Standard

Requirements to pass course

In order to pass this course students must:

- Achieve a composite grade of at least 50 out of 100.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 0 : 20 May - 26 May	Other	O-Week. Class materials for Week 1 released
Week 1 : 27 May - 2 June	Online Activity	Data sources
Week 2 : 3 June - 9 June	Online Activity	Data management
Week 3 : 10 June - 16 June	Online Activity	Ethics, privacy and confidentiality
Week 4 : 17 June - 23 June	Online Activity	Data quality, reproducibility
Week 5 : 24 June - 30 June	Online Activity	Data Linkage I
Week 6 : 1 July - 7 July	Other	Flex week
Week 7 : 8 July - 14 July	Online Activity	Data Linkage II
Week 8 : 15 July - 21 July	Online Activity	Data Linkage III
Week 9 : 22 July - 28 July	Online Activity	IT Security, SQL
Week 10 : 29 July - 4 August	Online Activity	Statistical Disclosure Control

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

General Schedule Information

The times and locations of classes can be found on myUNSW under Class Timetable.

The expected engagement for all UNSW 6UOC courses is 150 hours per term. This includes lectures, tutorials, readings, and completion of assessments.

Course Resources

Prescribed Resources

The main resources in this course are the course notes written by the lecturers, and the SAS notes and databases. There is no required textbook. Where appropriate, your lecturers have provided Chapter specific resources which may be of interest. These are usually non-compulsory readings, provided for further information and interest.

In this course, the use of software SAS for practicals and assignments is compulsory. It is optional to use other additional software (e.g. R, Git).

Recommended Resources

Recommended resources for this course are provided on the course Open Learning page.

Additional Costs

There are no additional costs associated with this course.

Course Evaluation and Development

Student feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

We use student feedback from myExperience surveys to develop and make improvements to the course each year. We do this by identifying areas of the course that require development from both the rating responses and written comments. Please spare a few minutes to complete the myExperience surveys for this course posted at the top of the Open Learning page at the end of term.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Marzia Hoque Tania		AGSM Level 2		By appointment, email to arrange	Yes	Yes
Director of teaching	Sanja Lujic		AGSM Level 2		By appointment, email to arrange	No	No

Other Useful Information

Academic Information

As a student of UNSW Medicine & Health you are expected to familiarise yourself with the contents of this course outline and the UNSW Student Code and policies and procedures related to your studies.

Student Code of Conduct

Throughout your time studying at UNSW Medicine & Health, you share a responsibility with us for maintaining a safe, harmonious and tolerant University environment. This includes within the courses you undertake during your degree and your interactions with the UNSW community, both on campus and online.

The UNSW Student Code of Conduct website provides a framework for the standard of conduct expected of UNSW students with respect to both academic integrity and your responsibility as a UNSW citizen.

Where the University believes a student may have breached the code, the University may take disciplinary action in accordance with the Student Misconduct Procedure.

The Student Conduct and Integrity Office provides further resources to assist you to understand your conduct obligations as a student at UNSW.

Academic Honesty and Plagarism

Academic integrity

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to the principle of

academic integrity, and ethical scholarship of learning is fundamental to your success at UNSW Medicine & Health.

Plagiarism, contract cheating, and inappropriate use of generative AI undermine academic integrity and are not tolerated at UNSW. For more information see the [Academic Integrity and Plagiarism toolkit](#).

In addition to the information you are required to review in your [ELISE training](#), UNSW Medicine & Health strongly recommends that you complete the [Working with Academic Integrity](#) module before submitting your first assessment task.

Referencing

Referencing is a way of acknowledging the sources of information that you use to research your assignments. Preferred referencing styles vary among UNSW Medicine & Health disciplines, so check your course Learning Management System (e.g. Moodle or Open Learning) page for information on preferred referencing styles.

For further information on referencing support and styles, see the Current Student [Referencing page](#).

Academic misconduct and plagiarism

At UNSW, academic misconduct is managed in accordance with the [Student Misconduct Procedure](#). Allegations of plagiarism are generally handled according to the [UNSW Plagiarism Management Procedure](#). Plagiarism is defined in the [UNSW Plagiarism Policy](#) and is not tolerated at UNSW.

Use of Generative AI and other tools in your assessment

UNSW has provided guiding statements for the [use of Generative AI in assessments](#). This will differ, depending on the individual assessment task, your course requirements, and the course stage within your program.

Your course convenor will outline if and how you can use Generative AI in each your assessment tasks. Options for the use of generative AI include: (1) no assistance; (2) simple editing assistance; (3) planning assistance; and (4) full assistance with attribution.

You may be required to submit the original generative AI responses, or drafts of your original

work. Inappropriate use of generative AI is considered academic misconduct.

See your course Moodle (or Open Learning) page for the full instructions for individual assessment tasks for your course.

Submission of Assessment Tasks

Special Consideration

In cases where illness, misadventure or other circumstances beyond your control will prevent you from submitting your assessment by the due date and you require an extension, you need to formally apply for Special Consideration through myUNSW.

UNSW has a **Fit to Sit/Submit rule**, which means that by sitting or submitting an assessment on the scheduled assessment date, you are declaring that you are fit to do so and cannot later apply for Special Consideration.

Timed online assessment tasks

If you experience a technical or connection problem during a timed online assessment, such as a timed quiz, you can apply for Special Consideration. To be eligible to apply you need to contact the Course Convenor and advise them of the issue immediately. You will need to submit an application for Special Consideration immediately, and upload screenshots, error messages or other evidence of the technical issue as supporting documentation. Additional information can be found on: https://student.unsw.edu.au/special-consideration

Examinations

Information about the conduct of examinations in your course is provided on your course Moodle page.

Other assessment tasks

Late submission of assessment tasks

UNSW has standard late submission penalties as outlined in the UNSW Assessment Implementation Procedure, with no permitted variation. All late assignments (unless extension or exemption previously agreed) will be penalised by 5% of the maximum mark per calendar day (including Saturday, Sunday and public holidays).

Late submissions penalties are capped at five calendar days (120 hours). This means that a student is not permitted to submit an assessment more than 5 calendar days (120 hours) after the due date for that assessment (unless extension or exemption previously agreed).

Failure to complete an assessment task

You are expected to complete all assessment tasks for your courses. In some courses, there will be a minimum pass mark required on a specific assessment task (a "hurdle task") due to the need to assure clinical competency.

Where a hurdle task is applicable, additional information is provided in the assessment information on your course Moodle page.

Feedback on assessments

Feedback on your performance in assessment tasks will be provided to you in a timely manner. For assessment tasks completed within the teaching period of a course, other than a final assessment, feedback will be provided within 10 working days of submission, under normal circumstances.

Feedback on continuous assessment tasks (e.g. laboratory and studio-based, workplace-based, weekly quizzes) will be provided prior to the midpoint of the course.

Any variation from the above information that is specific to an assessment task will be clearly indicated in the course and assessment information provided to you on your course Moodle (or Open Learning) page.

Faculty-specific Information

Additional support for students

The university offers a wide range of support services that are available for students. Here are some links for you to explore.

- The Current Students Gateway: https://student.unsw.edu.au

- Academic Skills and Support: https://student.unsw.edu.au/academic-skills

- Student support: https://www.student.unsw.edu.au/support

- Student Wellbeing, Health and Safety: https://student.unsw.edu.au/wellbeing

Mind Smart Guides are a series of mental health self-help resources designed to give you the psychological flexibility, resilience and self-management skills you need to thrive at university and at work.

- Mind Smart Guides: https://student.unsw.edu.au/mindsmart

- Equitable Learning Services: https://student.unsw.edu.au/els

- Guide to studying online: https://www.student.unsw.edu.au/online-study

Most courses in UNSW Medicine & Health use Moodle as your Learning Management System. Guidance for using UNSW Moodle can be found on the Current Student page. Difficulties with Moodle should be logged with the IT Service Centre.

- Moodle Support: https://student.unsw.edu.au/moodle-support

The IT Service Desk is your central point of contact for assistance and support with remote and on-campus study.

- UNSW IT Service Centre: https://www.myit.unsw.edu.au/services/students

Course evaluation and development

At UNSW Medicine & Health, students take an active role in designing their courses and their overall student experience. We regularly seek feedback from students, and continuous improvements are made based on your input. Towards the end of the term, you will be asked to participate in the myExperience survey, which serves as a source of evaluative feedback from students. Your input to this quality enhancement process is valuable in helping us meet your learning needs and deliver an effective and enriching learning experience. Student responses are carefully considered, and the action taken to enhance educational quality is documented in the myFeedback Matters section of your Moodle (or Open Learning) course page.

School-specific Information

Laboratory or practical class safety.

For courses where there is a laboratory or practical-based component, students are required to wear the specified personal protective equipment (e.g., laboratory coat, covered shoes, safety glasses) indicated in the associated student risk assessments. The student risk assessments will be provided on the course Moodle page and must be read and acknowledged prior to the class.

Master of Science in Health Data Science courses

Courses in the Master of Science in Health Data Science are hosted through Open Learning. Additional resources are available on the Health Data Science Student Hub.

Recording of lectures, tutorials and other teaching activities (MSc. HDS only)

Lectures, tutorials and other teaching activities may be recorded. Students should be advised that they are consenting to the recording by their enrolment in the course or participation in the activity. The purpose of audio and video recordings is to enhance the student experience by supporting engaged learning in an online teaching environment and ensure equitable access to all course resources for our students. If you have concerns about accessing course recordings, or being recorded, please contact the Course Convenor.

School Contact Information

School guidelines on contacting staff:

Course questions

All questions related to course content should be posted on Moodle (or Open Learning) or as directed by your Course Convenor.

In cases where email communication with course convenors is necessary, we kindly request the following:

- Use your official email address for any correspondence with teaching staff.

- We expect a high standard of communication. All communication should avoid using short-hand or texting language.

- Include your full name, student ID, and your course code and name in all communication.

Our course convenors are expected to respond to emails during standard working hours of Monday to Friday, 9am-5pm.

Administrative questions

If you have an administrative question about your program of study at the School please submit your enquiry online at UNSW Ask Us.

Complaints and appeals

Student complaints and appeals: https://student.unsw.edu.au/complaints

If you have any grievances about your studies, we invite you to address these initially to the Course Convenor. If the response does not meet your expectations, you may then contact:

School Grievance Officer, Prof Nick Di Girolamo (n.digirolamo@unsw.edu.au)

Health Data Science programs: School Grievance Officer, Dr Sanja Lujic (s.lujic@unsw.edu.au)