Tasmanian School of Business and Economics

BAA760
HEALTH ONTOLOGIES, TERMINOLOGIES, AND CLASSIFICATIONS

Semester 1, 2019

Unit Outline

Dr Maria Agaliotis and Ms Eva Fares
CONTACT DETAILS

Unit coordinator

Unit coordinator: Dr Maria Agaliotis and Ms Eva Fares
Email: maria.agaliotis@utas.edu.au
Consultation hours: By appointment

Lecturer/Mentor

Ms Eva Fares
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WHAT IS THE UNIT ABOUT?

Unit description

This unit will examine the fundamentals in healthcare information. The challenge for health information managers is understanding different ways information systems identify the same concept. Health information management is ensuring shared standard ontology, coding through classifications and terminologies are in place to allow stakeholders to access, analyse and monitor quality data to enhance decision making for patient care, health service planning, management and healthcare funding, within a safe and secure environment.

Comprised of six modules, the unit will enable students to critically evaluate the theory and principles related to ontologies, terminologies, and classifications used in health. Furthermore, students will gain insight into how the classification systems are used in the health care sector and understand the advantages and disadvantages of these different systems. The unit will also explore how the health system utilise these ontologies for performance (e.g. casemix and funding) systems in Australia and internationally. Students will examine the theory and practice related to clinical classification, clinical terminologies, and ontology development. The concept of ethical behaviour is explored in relation to using classification data.

Students will have opportunities to hear from experts across Australia and participate in industry case studies and analysis.

Intended Learning Outcomes

On completion of this unit, you will be able to:

1. Critically evaluate the theory, principles and practice of ontologies, terminologies, and classifications in Australian and international healthcare services.
2. Assess the role of clinical classification and Diagnosis-Related Groups (DRGs) in the Australian and international healthcare system.
3. Develop an ontology applicable to a healthcare service in Australia.
4. Differentiate between terminologies and classifications.
5. Demonstrate professional and ethical behaviour in the application of classification and terminology, applying corporate social responsibility.

Alterations to the unit as a result of student feedback

This is a new unit that has not previously been taught.
Assessment schedule

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Date due</th>
<th>Percent weighting</th>
<th>Links to Intended Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Task 1: Essay</td>
<td>Monday 1 April 2019, 2pm AEDT (Week 6)</td>
<td>30%</td>
<td>1, 2, 4</td>
</tr>
<tr>
<td>Assessment Task 2: Report</td>
<td>Monday 29 April 2019, 2pm AEST (Week 9)</td>
<td>40%</td>
<td>1, 3, 5</td>
</tr>
<tr>
<td>Assessment Task 3.1: Online discussion post 1</td>
<td>Friday 22 March 2019, 2 pm AEDT (Week 4)</td>
<td>10%</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Assessment Task 3.2: Online discussion post 2</td>
<td>Friday 10 May 2019, 2 pm AEST (Week 10)</td>
<td>10%</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Assessment Task 3.3: Online discussion post 3</td>
<td>Friday 31 May 2019, 2 pm AEST (Week 13)</td>
<td>10%</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

Assessment details

Assessment task 1: Essay

Task description

You are the Health Information Manager for a large public hospital. Your hospital Executive has identified the need for an upgrading of the Emergency Department Information System. The aim of the new system is to enhance the decision-making process for patients, health care providers and the hospital management.

Address, in an essay to the Executive Team, the following points:

1. An overview of the mandatory reporting clinical terminology and classification systems 1). SNOMED-CT and 2). ICD-10-AM covering:
   - Simplicity/complexity of system usage by clinicians to use and select the right diagnosis;
   - Ability to analyse the data; and,
   - Capacity to meet mandatory reporting requirements under the Emergency Department Data Collection (EDDC).
2. Recommend, with justification, which system is most appropriate to enhance the functioning of the ED.
The essay must include the following sections:

1. **Introduction** (Approx. 400 words, 4 marks): This includes the purpose and structure of the essay. Additionally, this section provides relevant health care organisation contextual background.

2. **Body**: (Approx. 1900 words, 20 marks):
   2.1 Define the different terminology and classification systems and quality of data (Approx. 500 words, 4 marks).

   2.2 Discuss the systems in relation to:
      2.2.1 Simplicity/complexity of system usage by clinicians to use and select the right diagnosis.
      2.2.2 Ability to analyse the data.
      2.2.3 Capacity to meet mandatory reporting requirements under the EDDC (Approx. 1000 words, 12 marks).

   2.3 Justification of your recommended system for the Emergency Department (Approx. 400 words, 4 marks).

3. **Conclusion** (Approx. 300 words, 3 marks): Outline key take away messages and clearly specify the recommended system and summary of reasons.

4. **Overall**: Quality of presentation and academic writing (3 marks).

Note: As per the AIHSM writing and presentation style guide’s ‘Essay Writing Guide’ is necessary. A copy of the final version of the assessment criteria and marking scheme will be available through the Assessment area in MyLO.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Measures Intended Learning Outcome:</th>
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</thead>
<tbody>
<tr>
<td><strong>Criterion 1</strong></td>
<td>Define the different terminology and classification systems in this scenario.</td>
</tr>
<tr>
<td><strong>Criterion 2</strong></td>
<td>Understand how classifications and terminologies ease in support clinicians, monitor data and assist in mandatory reporting.</td>
</tr>
<tr>
<td><strong>Criterion 3</strong></td>
<td>Describe how each of these are used in health. The strengths and weakness and justification of your chosen classification system.</td>
</tr>
</tbody>
</table>

| Task length | 2,600 words (10% +/- word count). Any other variance will attract a penalty. The word count includes such items as |
Assessment task 2: Report

Task description

In Australia, eHealth is a comprehensive and major initiative that has potential to promote safe, quality care through accurate, timely data and reports. As part of this initiative, your State Health department has established a priority project to improve the collection and use of electronic data. Hence the Executive Team have asked you to review and develop a proposal to upgrade the existing information systems for your service. Prepare a report that addresses the following:

1. Assess and map current information system capabilities, identifying needs and gaps, including integration, or not, across individual systems;
2. Identification of key stakeholder and their relationships;
3. Describe requirements and process to enable production of critical timely reports to stakeholders regarding:
   - hospital-acquired complication (HAC);
   - incidents of medication errors; and,
   - activity to targets.
4. Outline revised or new ontology, incorporating changes, if required, according to 1, 2 and 3.
5. Detail an implementation and evaluation plan for the next 12 months.

For this assessment you can chose any health care setting system - general practice, community-based specialist service or hospital service - for any population.

To submit a report for this task, that will include the following sections:

1. Executive Summary (Approx. 600 words, 5 marks): This includes succinctly summarising the purpose, the organisational context, and highlighting the main points from section 3 of the report.
2. Introduction (Approx. 600 words, 5 marks): This includes explaining succinctly the importance of eHealth
and information systems, the report purpose, the organisational context and structure of the report.

3. **Body** (Approx. 1550 words, 24 marks):

3.1 Assess and map current information system capabilities, identifying needs and gaps, including integration, or not, across individual systems (Approx. 500 words, 7 marks).

3.2 Identification of key stakeholder and their relationships (Approx. 200 words, 3.5 marks).

3.3 Describe requirements and process to enable production of three critical timely reports/alerts to stakeholders regarding: hospital-acquired complication; and, seriousness of medication errors; and, funding to targets (Approx. 500 words, 7 marks).

3.4 Detail and visually represent the revised or new ontology (Approx. 150 words, 3 marks).

3.5 Detail an implementation and evaluation plan for the next 12 months (Approx. 200 words, 3.5 marks).

4. **Conclusion** (Approx. 250 words, 3 marks): This includes succinctly summarising insights that addresses the purpose of the report and the key take-away messages in the report.

5. **Overall**: Quality of presentation and academic writing (3 marks).

Note: As per the AIHSM writing and presentation style guide’s general report format, this report can include title page, Table of Contents, glossary of terms, references and appendices (if necessary).

A number of inter-related assessment criteria, including quality of presentation and academic writing will be applied to judge this task. Some of the relevant major criteria are provided below. A copy of the final version of the assessment criteria and marking scheme will be available through the Assessment area in MyLO.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Measures Intended Learning Outcome:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Criterion 1</strong></td>
<td>Describe the ontology you are presenting, the key stakeholders involved and their relationships.</td>
</tr>
<tr>
<td>Criterion 2</td>
<td>Pictorially present the ontology, with an associated description of the purpose of the ontology.</td>
</tr>
<tr>
<td>Criterion 3</td>
<td>Describe any tools that you used to develop your ontology, including evaluating their uses and limitations.</td>
</tr>
<tr>
<td>Criterion 4</td>
<td>Describe implementation and evaluation considerations for the ontology in delivering your health care service.</td>
</tr>
<tr>
<td>Task length</td>
<td>3,000 words (10% +/- word count). Any other variance will attract a penalty. The word count includes such items as headings, quotes and in-text citations. It does not include such items as any appendices and reference list at the end of the assignment.</td>
</tr>
<tr>
<td>Due by date</td>
<td>Monday 29 April 2019, 2pm AEST (week 9).</td>
</tr>
</tbody>
</table>

**Assessment task 3 (Parts 3.1 – 3.3) – MyLO discussion forum (Online)**

| Task description | This online discussion forum on MyLO is designed for students to share the critical argument of key concepts introduced in the readings. This discussion forum is related to the unit’s curriculum concepts and include issues of classification systems, terminologies, coding, mandatory report, funding systems and associated management implications for health information managers.

There will be three (3) online discussion forums held during the semester (weeks 3 to 13 inclusive) and you are required to participate by the dates suggested in the Unit Schedule. The due date for each of the three discussion forums will also be published in MyLO discussion forum section.

In each discussion forum, a student will be asked to answer one question per discussion forum and make critical comments relevant to the selected topic in 750 words.

You are encouraged to draw on your own professional experience and reflect critically on the topics being covered in this unit, supporting your statement with credible evidence (and applicable in-text citations and a reference list).

A number of interrelated assessment criteria will be applied to judge the quality of work. Some of the relevant major criteria are provided below. A copy of the final version of the assessment criteria and marking scheme will be available through the Assessment area in MyLO. |
Criterion | Measures Intended Learning Outcome:
--- | ---
Criterion 1 | Explanation of the relevant theoretical concepts addresses the fundamental issues; with excellent coherence, clarity and succinctness. | 1 – 5
Criterion 2 | Explanation of the relevant empirical practices is supported with examples from workplace in health organisations; with excellent coherence, clarity and succinctness. | 1 – 5
Criterion 3 | Discussion solidly supported with relevant, wide range of and contemporary evidence (e.g. academic literature and industry reports). | 1 – 5
Task length | One (1) 750word (10% +/- word count) post per discussion forum. There are three discussion forums to be completed during the semester. A total of three (3) posts is required. Any other variance will attract a penalty. The word count includes such items as headings, quotes and in-text citations. It does not include the any appendices, and reference list at the end of the assignment. |
Due by date | Friday 22 March 2019, 2 pm AEDT (Week 4)
Friday 10 May 2019, 2 pm AEST (Week 10)
Friday 31 May 2019, 2 pm AEST (Week 13)
For each of the three Discussion Forums (Forums 1, 2 & 3), you will have to complete the following two steps:
1. Post your answer in the MyLO Discussion Forum (Communication > Discussion).
2. Submit two separate documents in the “Assessment 3 Discussion Forum” folders (Assessments > Assignments), which are:
   - A completed assignment cover sheet.
   - A Word version of the answer that you posted in the MyLO Discussion Forum (Step 1 above). Also include the selected topic in the Word version.
Failure to complete the above two steps will result in a delay in feedback on your participation in each discussion forum.
WHAT LEARNING OPPORTUNITIES ARE THERE?

Resources

Required readings
There are no prescribed texts for this Unit. The learning materials of the unit will be drawn from publications, journal articles and other credible sources/ websites. You will be able to access the learning materials through the Learning Hub section of the MyLO unit. Journal articles and other readings will be made available throughout the semester via MyLO.

Recommended readings
There is a set of recommended and supplementary readings available in the learning context section of MyLO.

Suggested readings

In addition, you are also expected to be familiar with the key academic journals in the discipline from which useful insights may be derived. You are encouraged to regularly review relevant papers published in:

Health Information Management Journal
Health Information Management - Interchange
International Journal of Medical Informatics
Journal of AHIMA
Journal of the American of Medical Informatics Association (JAMIA)
Journal of Medical Systems
Journal of Medical Internet Research
Perspective in Health Information Management

Please also review regularly the relevant information/reports that are published the following websites:

Health Information Management Association of Australia Limited, (HIMAA)
Australasian College of Health Informatics

Health Informatics Society of Australia
https://www.hisa.org.au/

Healthcare IT News Australia [part of the Health Information and Management Society (HIMSS)]

Australian Classification of Health Interventions (ACHI)
https://meteor.aihw.gov.au/content/index.phtml/itemId/514008

Australian Consortium for Classification Development
https://www.accd.net.au/

Australian Digital Health Agency

Australian Institute of Health and Welfare, METeOR (Metadata Online Registry)
https://meteor.aihw.gov.au/content/index.phtml/itemId/181162

Independent Hospital Pricing Authority (IHPA)

National Commission of Safety and Quality in Health Care

International
International Federation of Health Information Management Associations (IFHIMA)
https://ifhima.org/about-us-2/
Reading Lists

Reading Lists provide direct access to all material on unit reading lists in one place. This includes eReadings and items in Reserve. You can access the Reading List for this unit from the link in MyLO, or by going to the Reading Lists page on the University Library website.

Equipment, materials, software, accounts

At UTAS, we use Turnitin and Grademark software to provide feedback on the assessments. Please visit the “useful resources for assessment” section on MyLO for more details on the use of software in this unit.

EndNote X8 will be required for managing references. A guide for downloading and using EndNote is available on the UTas Library website: http://utas.libguides.com/endnote.

Activities

Details of teaching arrangements

Master-classes

There is an intensive master-class incorporating this and two other units. Master-classes are voluntary. The master-class is designed to expose students to industry leaders in their field. The lecturers will employ a range of teaching techniques to foster participation, and critical and applied thinking around the topic.

The master-class is not specifically designed to address the assessment tasks.

The master class for this unit will be held on Friday 30 and Saturday 31 August 2019 (Semester 2).

The master-class will be held at the Rozelle Campus, University of Tasmania, Sydney. Details of the class will be posted via MyLO once semester has started. Students should make arrangements to attend the master-class as soon as possible.

Online lectures
There will be online lectures arranged around the learning modules and an orientation lecture. These will be held using the web conferencing facility available in MyLO and will be on nominated **Mondays at 5:30pm AEDT** (or AEST where applicable), except where this falls on a public holiday. Some lectures may include a guest speaker whilst others will focus on an upcoming assessment. Whilst these are not compulsory and are recorded, in the event that no student attends the live session, the lecture will be closed for that session. Low attendance will reduce the value of the discussion. Attendance allows you to ask any questions you have and receive an immediate response. The dates for these online lectures can be found in the Study Schedule at the end of this unit outline.

**Specific attendance/performance requirements**

As the average study time recommended for a unit in the Masters’ program is approximately 10 hours per week (though this can vary considerably from student to student), you might expect to devote around 130 hours during the semester. The master-classes represent 8 hours of this total. This means that the remaining time should be allocated to reading, participating in MyLO discussion forums, and completing assessment tasks. Some of the expectations we have of you as a student enrolled in this unit are; engaging with the readings provided on MyLO, participate in or listen to recorded online lectures and regularly monitor MyLO announcements.

In this unit, your active engagement will be monitored in the following way:

1. Submission of Assessment 1.
2. Weekly access in the MyLO site.

If you do not demonstrate evidence of having engaged actively with this unit by completing these two activities by Week 4 of semester, your enrolment may be cancelled or you may be withdrawn from the unit.
<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE BEGINNING</th>
<th>MODULE</th>
<th>ONLINE LECTURE (MONDAY 1730)</th>
<th>DUE DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>O-Week</td>
<td>Monday 18 February</td>
<td>Orientation – log into MyLO and familiarise yourself with the unit.</td>
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<tr>
<td>1</td>
<td>Monday 25 February</td>
<td><strong>Module 1:</strong> Introduction to ontologies, terminologies and classifications.</td>
<td><strong>Online lecture 1</strong> Monday 25 February 1730 – 1830</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Monday 4 March</td>
<td><strong>Module 2 &amp; 3:</strong> Clinical classification and DRGs.</td>
<td><strong>Online lecture 2</strong> Monday 4 March 1730 – 1830</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Monday 11 March</td>
<td></td>
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<tr>
<td>4</td>
<td>Monday 18 March</td>
<td><strong>Module 4:</strong> Terminologies in Health.</td>
<td><strong>Online lecture 3</strong> Monday 18 March 1730 - 1830</td>
<td><strong>Assessment 3.1:</strong> Discussion Post 1 Friday 22 March, 2pm AEDT</td>
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<td>5</td>
<td>Monday 25 March</td>
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<td>6</td>
<td>Monday 1 April</td>
<td><strong>Module 5:</strong> Developing an ontology.</td>
<td><strong>Online lecture 4</strong> Monday 8 April 1730 - 1830</td>
<td><strong>Assessment 1:</strong> Essay Monday 1 April, 2pm AEDT (Module: 1 &amp; 3)</td>
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<tr>
<td>7</td>
<td>Monday 8 April</td>
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<td>8</td>
<td>Monday 15 April</td>
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<td><strong>MID-SEMESTER BREAK 18 – 25 APRIL 2019 (INCLUSIVE)</strong></td>
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<td>9</td>
<td>Monday 29 April</td>
<td><strong>Module 5 cont.</strong></td>
<td><strong>Online lecture 5</strong> Monday 29 April 1730 - 1830</td>
<td><strong>Assessment 2:</strong> Report Monday 29 April, 2pm AEST</td>
</tr>
<tr>
<td>10</td>
<td>Monday 6 May</td>
<td><strong>Module 6</strong> Processes to support good practice.</td>
<td><strong>Assessment 3.2:</strong> Discussion Post 2 Friday 10 May, 2pm AEST</td>
<td></td>
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</table>
|    | Monday 13 May | Online lecture 6  
Monday 20 May  
1730 - 1830 | Assessment 3.3:  
Discussion Post 3  
Friday 31 May,  
2pm AEST |
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<tr>
<td>11</td>
<td>Monday 13 May</td>
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<tr>
<td>12</td>
<td>Monday 20 May</td>
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<tr>
<td>13</td>
<td>Monday 27 May</td>
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**MASTER CLASS FRIDAY 30 AUGUST AND SATURDAY 31 AUGUST** (SEMESTER 2, WEEK 7)  
SPECIALISATION: ORGANISATIONAL DEVELOPMENT  
BAA757 IMPLEMENTING HEALTH MANAGEMENT PRAXIS & BAA755 HEALTHCARE ORGANISATIONAL BEHAVIOUR  
** 2nd day to be confirmed in semester 2
ACCREDITATION

AACSBAccreditation

The Tasmanian School of Business and Economics (TSBE) is currently in the process of applying for business accreditation with the Association to Advance Collegiate Schools of Business (AACSB) – the lead program for accrediting business schools globally. AACSB seeks to connect educators, students, and business to achieve a common goal – to create the next generation of business leaders.

By joining AACSB and going through the accreditation process, TSBE is joining a global alliance committed to improve the quality of business education around the world, and to share the latest innovations in business education. Gaining Business Accreditation with AACSB is a multi-year process involving TSBE demonstrating our performance against the 15 accreditation standards.

Once complete, TSBE will join a select community of accredited business schools, with only 7% of all business schools globally having completed the AACSB process. This will further enhance the reputation of TSBE, and further enhance the global recognition of your qualifications. To find out more about AACSB click here.