EMERGING [INFECTIOUS] DISEASES 631

Curtin University of Technology
UNIT OUTLINE
Semester 1, 2012

Unit Details

Unit Index Number: 310669

Credit Points: 25 credit points upon successful completion of this unit

Unit Coordinator: ASSOCIATE PROFESSOR TRILOCCHAN MUKKUR

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Phone: (08) 9266.7520

Fax: (08) 9266.2342

Method of Assessment

To pass this unit you must complete the assessment tasks listed below.

<table>
<thead>
<tr>
<th>Assessment Tasks</th>
<th>Worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student presentations</td>
<td>20 %</td>
</tr>
<tr>
<td>Assignments [1]</td>
<td>30%</td>
</tr>
<tr>
<td>Challenging Question and Answer</td>
<td>5%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>45%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
</tr>
</tbody>
</table>
Please read this outline fully before commencing your study in this unit.
Welcome

Welcome to Emerging Diseases unit [EID] 631; this unit will cover both emerging as well as those infectious diseases that may have re-emerged such to pose a serious threat, similar to that posed by emerging infectious diseases, to the global community. The diseases covered will include selected mainly bacterial and viral diseases.

Contact

Please do not hesitate to contact me at any stage if you have any questions, queries or comments on the unit.

Dr T K S Mukkur (Associate Professor)
Unit Coordinator
Emerging Infectious Diseases

Requirements to Complete the Unit

Prerequisite skills
The content covered in EID 631 assumed that students have a basic knowledge of medical microbiology, and molecular biological and immunological concepts underpinning host defense mechanisms.

Technology
It is essential, that you have access to:

• a computer with an Internet connection, which you can use effectively search resources available on the internet such as PubMed, Cochrane databases etc.,

• email address permitting contact with your lecturers and other students studying the same unit.

You can access the computing facilities on campus if you do not have access to a computer at home.

Aims

The overall aim of the EID 631 unit is to build knowledge base on the clinical features of emerging and select re-emerging infectious diseases, aetiological agents, incidence, complications, epidemiology, transmission, risk groups, surveillance, trends, clinical management, and challenges and opportunities presented by these infectious diseases for advancement of the prevention strategies.

This unit emphasizes the importance learning the arts of [1] public presentation acquired through presentation of seminars and [2] written communication acquired via writing of two [2] review assignments using scientific literature. These tasks should improve student’s abilities to retrieve, analyse and evaluate relevant information, enhance problem solving and decision making skills, and provide additional opportunities for peer evaluation of presentation by your colleagues. These skills need to be combined with
good written and verbal communication abilities and effective interpersonal skills. Scientists with these skills are valued employees and are sought after by employers.

Unit Outcomes

Learning outcomes (Content knowledge)
This unit is designed to provide you with the major current EIDs, factors that impact their emergence or re-emergence, their clinical features, incidence, epidemiology, clinical management, and potential preventative strategies. This unit is journal-based and there is no assigned textbook for this unit. However, the list of significant textbooks and journals that you may need to consult may depend upon the topic under coverage.

Professional skills outcomes
On successful completion of this unit you will have completed tasks leading to the development of the following skills:

**Effective communication**
Communicating with your lecturer and other students enrolled in EID 631.
Use of written, verbal and electronic media

**Analysis and evaluation of information**
Accessing, analysing and critically evaluating relevant information
Completing self-study

**Problem solving and decision making**
Setting aside time to study, research and review topic items
Reviewing lecture materials
Completion of assessments

**Peer Reviewing**
Each student presentation will be peer reviewed and marked by the other students enrolled in the unit, with the final decision on the mark being made by the coordinator of the unit

**Awareness of issues affecting health professionals**
Development of high ethical standards
Knowledge of the inter-relationship between science disciplines and their interrelationships
Syllabus

Unit Materials
Unit syllabus [see the lecture schedule for topics to be covered in the unit]

Textbook
There is no prescribed textbook for this unit because the unit is essentially journal-based. The most important search engines to be followed are PubMed [http://www.ncbi.nlm.nih.gov/pubmed/] and Cochrane databases [http://www.cochrane.org/ and www.Cochrane.org/]. Access to these sites is available via the Curtin University library. Some of the journals that may need to be consulted are as follows:

Annual Reviews - Microbiology
Archives of Microbiology
British Medical Journal
Canadian Journal of Microbiology
Clinical Infectious Diseases
Clinical Microbiology Reviews
Communicable Diseases Intelligence [http://canarydatabase.org/browse/journal/0725-3141]
Current Infectious Disease Reports
Current Microbiology
Diagnostic Microbiology and Infectious Disease
Emerging Infectious Diseases [http://www.cdc.gov/ncidod/EID/index.htm]
European Journal of Medical Research
FEMS Microbiology Reviews
Infection and Immunity
Institute of Medicine of the National Academies [http://www.iom.edu/CMS/3783/3924/5438.aspx]
Journal of the American Medical Association [JAMA]
Journal of Clinical Microbiology
Journal of Clinical Virology
Journal of General Virology
Journal of Infectious Diseases
Journal of Medical Microbiology
Journal of Medical Virology
Journal of Virology
Medical Microbiology and Immunology
Medical Journal of Australia
Microbes and Infection
Morbidity and Mortality Weekly Reports from the CDC
National Centre for Immunisation Research [NCIRS]
Nature
Nature Microbiology Reviews
New England Journal of Medicine
New Scientist
Reviews in Medical Virology
The Infectious Disease Review
The Lancet Infectious Diseases
Trends in Microbiology
Veterinary Microbiology
Virology
Weekly Epidemiological Record (WHO)

AND MANY MORE CONTINUOUSLY UPCOMING FREE/OPEN ACCESS JOURNALS

The textbooks that may be helpful are as follows:

1. Principles and Practice of Infectious Diseases Vol 1 and 2, Sixth Edition, 2005
5. Other resources given by the guest lecturers
6. For assignments and seminar presentations: consult PubMed and Cochrane databases
   http://www.cochrane.org/reviews/
   Wilkikipedia will not be accepted.

Web-based resources
The Unit Coordinator maintains a Web site for use by the enrolled students. You will be informed about specifics of the site in the class. Depending upon the number of students, the lecture material may be provided in the class by the lecturer. However, please make sure to check the blackboard for announcements, lecture notes etc., The distribution of the seminar notes prepared by the students will also be handed out to the class via the unit coordinator.

Contact Details
The unit coordinator for Emerging Infectious Diseases 631 is Dr T K S Mukkur [Associate Professor] in the School of Biomedical Sciences at Curtin. During the semester you may need to contact Dr Mukkur for various reasons. He can be contacted via email [preferred option] or in person; if absolutely necessary by phone or fax.

Office 308.208
Email: T.Mukkur@curtin.edu.au
Phone: (08) 9266 7520 (office)
Fax (08) 9266 2342
Study Load

You will need to spend about 6 hours a week outside of scheduled classes in preparing the seminar and studying in this unit to be successful. It is important that you keep up with program as it is very difficult to catch up on lost or wasted time. You may need more time per week if you haven't acquired a strong background in medical microbiology, and fundamental molecular biological and immunological concepts.

Delivery of Unit

Tuition pattern
Four (4) hours per week allocated as follows:
• Lecture 1x 2 hours
• Tutorial 1 x 1 hours

Seminar presentations by students is a part of the tutorial time.

Lectures
Attendance at all lectures is strongly recommended particularly because a number of outside experts on different topics have been invited to make presentations.

Assessment Format

To pass this unit you must complete the assessment tasks listed below.

<table>
<thead>
<tr>
<th>Assessment Tasks</th>
<th>Worth</th>
</tr>
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<tbody>
<tr>
<td>Student presentations [1]</td>
<td>20 %*</td>
</tr>
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<td>35%</td>
</tr>
<tr>
<td>Challenging Question and Answer</td>
<td>5%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>40 %*</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
</tr>
</tbody>
</table>

Students are expected to achieve a pass standard in each of the assessments to complete EID 631 unit. Note that a mark of 50% or more in all the components of the unit is required in order to secure a pass. Failure in any one area may result in an overall failure in this unit regardless of the total marks accrued. Students whose performance in any assessment is unsatisfactory may fail the entire unit or be required to complete additional assessment(s) to a satisfactory standard.

Assessment Details

Student Presentations/Seminars
Each student will participate in the delivery of one seminar worth 15% each in the unit. Students may be required to present seminars as groups of 2 or 3, depending upon the enrollment in the unit. The presentation time will be 40 minutes with a 10-minute
question period. Grading of the seminar presentation will be done by your classmates as well as by the lecturer. However, the final mark of the seminar presentation will be the decision of the lecturer.

**Assignment**
Each student will be required to submit one major review paper [6,000 word limit] on one of the allocated topics. The assignments will be worth 35% of the total assessment of the unit. The assignment details and instructions on the preparation of the review paper will be during the lecture period.

**Final examination**
The final theory examination will be worth 45% of the total assessment mark for the unit, depending upon the number of students enrolled in the unit. Forty percent [40%] of the questions in the final examination will cover the topics presented as seminars by students.

**Due dates**
You should note the following dates regarding assignments, assessments and examinations:
- **Assignments** As requested
- **Seminars** As shown in the Lecture Schedule
- **Final Examination** Within official University examination period

**Mobile Phones**
If you have a mobile, please ensure that it is **TURNED OFF [unless there is an emergency]** during lecture and practical sessions as a courtesy to both lectures and other students. Students who do not comply with this request can be asked to leave the class.

**Copyright Requirements**
As a student of Curtin you must be familiar with the requirements of the University's Copyright Procedures. Guidance is available to you at the following web page ([http://lisweb.curtin.edu.au/copyright/](http://lisweb.curtin.edu.au/copyright/)) under the heading Information for All Students. Curtin's Copyright Procedures can be found under the heading Related Curtin Policies and Procedures whilst the Copyright Act can be accessed from the Additional information heading at that web site should you wish to understand the source of the Procedures.
Failure to comply with the University's policies and procedures on Copyright and IT/IS use may include suspension or termination of enrolment, fines, withdrawal of privileges for use of the University's ICT facilities and services and, depending on what is copied, stored or communicated, may also render you liable to prosecution in the courts.

**Plagiarism Policy** (as adopted by the School of Biomedical Sciences)
It is not acceptable to simply copy the words of other students or authors when completing the weekly exercises and assignments in this unit. This action constitutes plagiarism and is regarded as academic malpractice. The penalties for plagiarism can be severe and may include termination from your course of study. All direct quotes must be correctly attributed to the author and should be kept to a minimum. Also, you should include a list of references to acknowledge the source(s) of information used to produce any written work.
The School of Biomedical Sciences advises students that it will use screening software to check for plagiarism in submitted work suspected of containing plagiarised material and also for routine screening of text as deemed appropriate by the Head of School.

Useful examples and explanations of plagiarism may be seen at the following web site – These will help you in understanding the nature of this form of academic malpractice.

http://www.indiana.edu/~wts/wts/plagiarism.html

As a guide only, typical penalties which may be imposed by the School of Biomedical Sciences for some of the more common types of plagiarism (including collusion) are shown in the Table below. Please note that each case of academic malpractice is assessed individually, and that penalties actually imposed by the Head of School (or delegate) may vary from the examples shown in the Table.

<table>
<thead>
<tr>
<th>Example</th>
<th>Degree of seriousness</th>
<th>Typical Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students submitting very similar work (even as a result of legitimate cooperation)</td>
<td>Collusion Minor to Severe depending on context</td>
<td>Loss of marks for that question or assignment etc by both students</td>
</tr>
<tr>
<td>Not referencing input (factual statements, definitions etc) where students’ words are used</td>
<td>Minor to Intermediate</td>
<td>Loss of 5% of assessment entity for each instance</td>
</tr>
<tr>
<td>Not referencing input where plagiarised words are used</td>
<td>Depends on context, but may be serious</td>
<td>Loss of 50 – 100% of marks for that question or assignment as appropriate</td>
</tr>
<tr>
<td>Not acknowledging ideas or concepts of others (ie. stealing intellectual property)</td>
<td>Serious misconduct</td>
<td>Loss of marks plus an additional penalty which could entail failure of unit and/or possible termination from course depending on the circumstances</td>
</tr>
</tbody>
</table>

**Supplementary Examinations**

Supplementary examinations are awarded only at the discretion of the Board of Examiners. The aim of a supplementary examination is to allow the student or correct minor problems/deficiencies in the initial assessment and not to gain extra study time or correct major problems. The number of supplementary examinations awarded will be kept to a minimum for any one examination period and for this course of study.

**NB** Supplementary examinations are not automatically awarded. The Board of Examiners will carefully review individual cases. No written application for supplementary examination will be considered.

Supplementary examinations, if awarded, will be indicated on the official Curtin Examination result statement posted to all students, and will also be listed on the School notice board 24 hours after the Board of Examiners meeting. It is **your** responsibility to check your status. Students should note that supplementary examinations for **units conducted in the School** will be held at times to be advised. A student who does not sit for a scheduled supplementary examination has no claim to a further examination. If you are awarded a supplementary examination it is imperative that you confirm the time and venue for the exam.
Deferred Assessment

Deferment of an examination is not automatic. Students may be permitted by the relevant Board of Examiners to defer an examination or other assessment where circumstances outside their control have arisen. However, a student's overall performance may be taken into account in granting permission to defer an examination.

Applications for deferment on health grounds or as a result of extenuating circumstances must be submitted not later than seven (7) days after the end of the relevant examination period or assessment date during the semester. **Detailed** medical certificates should be attached to the application where appropriate.
<table>
<thead>
<tr>
<th>Date (2012)</th>
<th>Lecture or Activities</th>
<th>LECTURE SCHEDULE (2 x L + 1 x T)</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 27</td>
<td>1</td>
<td>Orientation Week</td>
<td></td>
</tr>
<tr>
<td>March 5</td>
<td>2</td>
<td>-Introduction to unit and requirements for completion Organisation and prototype seminar presentation method</td>
<td>TKSM</td>
</tr>
<tr>
<td>March 12</td>
<td>3</td>
<td>Emerging faecal-oral route Infectious Diseases Exemplar – Enterovirus infections</td>
<td>BC</td>
</tr>
<tr>
<td>March 19</td>
<td>4</td>
<td>-ROTAVIRUS DIARRHOEA &amp; MANAGEMENT STRATEGIES -EHEC INFECTION &amp; MANAGEMENT STRATEGIES -CAMPYLOBACTER INFECTIONS AND MANAGEMENT STRATEGIES</td>
<td>STUDENT SEMINARS</td>
</tr>
<tr>
<td>March 26</td>
<td>4</td>
<td>Contribution of microbial resistance to emerging infectious diseases 1: MRSA INFECTIONS &amp; MANAGEMENT STRATEGIES 2: ANTIBIOTIC-RESISTANT PNEUMOCOCCAL INFECTIONS &amp; MANAGEMENT STRATEGIES</td>
<td>TKSM</td>
</tr>
<tr>
<td>April 2</td>
<td>5</td>
<td>-Introduction and highlights of current emerging infectious diseases &amp; Factors contributing to emerging and re-emerging infectious diseases - Categorization and special considerations of the significant emerging and re-emerging infectious diseases</td>
<td>TKSM</td>
</tr>
<tr>
<td>April 9-13</td>
<td>TUITION-FREE WEEK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16</td>
<td>6</td>
<td>Emerging Sexually Transmissible Infectious Diseases II Exemplar 1– HIV Exemplar 2-Gonorrhoea &amp; Chlamydiosis</td>
<td>BB</td>
</tr>
<tr>
<td>April 23</td>
<td>7</td>
<td>Emerging Air-borne Infectious Diseases Exemplar V– Exotic Diseases [SARS and Influenza] -H5N1 INFECTION &amp; MANAGEMENT STRATEGIES</td>
<td>BB</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 30</td>
<td>8</td>
<td>Emerging Vector-borne Viral Infectious Diseases Exemplar IX Dengue Fever West Nile Fever &amp; Management Strategies</td>
<td>AI</td>
</tr>
<tr>
<td>May 7</td>
<td>9</td>
<td>Emerging Vector-borne viral Infectious Diseases [Contd.] Exemplar VIII Viral Encephalitis</td>
<td>BB</td>
</tr>
<tr>
<td>May 14</td>
<td>10</td>
<td>Emerging Sexually Transmissible Infectious Diseases I Genital Herpes Infection &amp; Management Strategies</td>
<td>TKM</td>
</tr>
<tr>
<td>May 21</td>
<td>11</td>
<td>REVIEW SESSION + FINAL EXAMINATION FORMAT ASSIGNMENT TURN-IN DAY</td>
<td>TKSM</td>
</tr>
</tbody>
</table>

AI: Alison Imrie; BB: Dr Brian Brestovac; BC: Dr Beng Chua; TKM: Trilochan Mukkur

Note:
- Seminars will be delivered by students in groups of 2-3 students per group.
- Approximately 50% of questions in the final examination will be sourced from the student seminar presentations.