Haematology 331 (310494)

Semester One, 2011

Unit study package number: 310494
Mode of study: Internal
Tuition pattern summary: 20 x 1 hour Lecture
10 x 3 hour Practical/Tutorial

Total 5 Hours per week

Credit value: 25 credits
Pre-requisite units: Completion of Haematology 234.
Co-requisite units: None
Anti-requisite units: None
Additional Requirements: None
Result type: Grade/Mark
Approved incidental fees: None

Scheduled times and Venues: (free text)
Unit Coordinator: Name: Mr Jeff Jago
Phone: (08) 9266 2345
Email: J.Jago@curtin.edu.au
Building : Room: 308:217
Consultation times: Monday - Friday

Teaching Staff: Name: Mr Jeff Jago
Phone: (08) 9266 2345
Email: J.Jago@curtin.edu.au
Building : Room:

Name: Mr Wally Tarnowski
Email: Wally.Tarnowski@curtin.edu.au

Learning Management System: FLECS - Blackboard (oasis.curtin.edu.au)
Syllabus
The unit Haematology 331 consists of three main areas
• General haematology
• Haemostasis
• Transfusion science

Introduction
Haematology 331 is designed to enable you to understand and effectively contribute to the practice of diagnostic haematology in a variety of pathology organisations. Content knowledge is not always the highest priority for employers of Medical Scientists. Rather, employers want university graduates who are capable of working independently and who can plan and organise their workload to achieve pre-determined goals. The ability to retrieve, analyse and evaluate relevant clinical information with developed problem solving and the ability to work as part of a team are also highly desirable. University graduates are also expected to have good written and verbal communication abilities and effective interpersonal skills.

This unit will encourage you to develop both as an independent learner and as part of a team with other students and your lecturer.

Unit Learning Outcomes
On successful completion of this unit students can:

1. Demonstrate good laboratory practice.
2. Understand the theoretical basis of a variety of haematological disorders and the principles of methods selected to assist diagnosis including result interpretation.
3. Have developed skills to competently perform both basic and more advanced haematological and blood transfusion serological techniques and be able to apply these investigations to laboratory diagnosis of disorders of the blood.
4. Acquire competencies and skills required for performance and interpretation of haematological laboratory procedures.
5. Comprehend the suite of laboratory measurements in respect to the differential diagnosis of disease.
Curtin's Graduate Attributes

<table>
<thead>
<tr>
<th>APPLY DISCIPLINE KNOWLEDGE</th>
<th>THINKING SKILLS (USE ANALYTICAL SKILLS TO SOLVE PROBLEMS)</th>
<th>INFORMATION SKILLS (CONFIDENCE TO INVESTIGATE NEW IDEAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNICATION SKILLS</td>
<td>TECHNOLOGY SKILLS</td>
<td>LEARNING HOW TO LEARN (APPLY PRINCIPLES LEARNT TO NEW SITUATIONS)</td>
</tr>
<tr>
<td>INTL PERSPECTIVE (VALUE THE PERSPECTIVES OF OTHERS)</td>
<td>CULTURAL UNDERSTANDING (VALUE THE PERSPECTIVES OF OTHERS)</td>
<td>PROFESSIONAL SKILLS (WORK INDEPENDENTLY AND AS A TEAM) (PLAN OWN WORK)</td>
</tr>
</tbody>
</table>

Mechanisms of establishing learning outcomes

LECTURES
Attendance at all lectures is strongly recommended. Lecture outlines will be available via FLECS-Blackboard for most lectures or will be handed out during lectures. Additional notes or outlines may also be distributed at relevant lectures.

PRACTICALS
When required, practicals must be fully written up and submitted for assessment by the end of the practical period or the following session. Non-attendance or any unsatisfactory performance in any section of the practical work, eg. accuracy, blood film interpretation, failure to write reports to a satisfactory standard, failure to submit work (at the correct time), failure to keep or make available for review your practical work file etc., may result in a fail grade or necessitate the satisfactory completion of extra work during non-class time. Please note - that due to limited laboratory and staff supervision availability repeat practical sessions will not be available during semester. Students demonstrating an unsatisfactory practical performance may therefore be graded as fail or offered the opportunity to complete extra work during semester breaks.

TUTORIALS
Tutorial sessions will form an integral part of the course, particularly the blood film work. At tutorials students will be required to present for discussion their results of practical exercises and case studies.

STUDY LOAD
You will need to spend about 5 hours a week outside of scheduled classes studying in this unit to be successful. Keeping up with the work is the key to being successful.
TUITION PATTERN
The semester structure for 2011 will be 12 teaching weeks preceded by an orientation week. Students are required to attend scheduled events during the orientation week.

5 hours per week allocated as follows:
- Lectures: 2 x 1 hour
- Practicals/Tutorials: 1 x 3 hours

Other Learning Activities

Learning Resources

Essential Texts
- Clinical Laboratory Haematology 2nd ed, Shirlyn B. McKenzie. Publisher: Pearson

Recommended Texts
You do not have to purchase the following textbooks but you may like to refer to them.
- Transfusion Science, 2nd ed. J. Overfield, M. Dawson & D. Hamer. ($63.00)

Online Resources
You will be referred to a wide range of resources, including course notes and information, on the World Wide Web. This information can be accessed using FLECS-Blackboard via OASIS. All students in the unit will need regular access to this site. You will use such features as chat rooms, bulletin boards, email and quizzes to complete various components of the unit. Additional unit materials are also available from this site.

The Home Page has a Guide for Students that introduces how to use the different facilities offered by FLECS-Blackboard.

You may also find some of the information available through the School of Biomedical Sciences Home Page useful. From here, you can find out about the School of Biomedical Sciences, its courses and its staff. The URL for the School of Biomedical Sciences Home Page at Curtin is:
http://www.biomed.curtin.edu.au/
Assessment

Assessment Schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>Value (%)</th>
<th>Date due</th>
<th>Unit Learning Outcome(s) assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical portfolio</td>
<td>10%</td>
<td></td>
<td><img src="image1.png" alt="Diagram" /></td>
</tr>
<tr>
<td>Mid semester theory test</td>
<td>10%</td>
<td></td>
<td><img src="image2.png" alt="Diagram" /></td>
</tr>
<tr>
<td>Practical Exam</td>
<td>30%</td>
<td></td>
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<tr>
<td>Final Theory Exam</td>
<td>50%</td>
<td></td>
<td><img src="image4.png" alt="Diagram" /></td>
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</tbody>
</table>

Detailed information on assessment tasks

1. **Task 1: Practical Portfolio.** Part of the practical component of Haematology 331 will be assessed as a “Practical folio”. In practical sessions, you will be required to write your reports in PEN. Your report should include comments and remarks on the correct diagnosis/result, whether or not the further tests you suggested were appropriate and why they are relevant. These reports will make up your folio, to be submitted at the end of the practical examination week for the practical portfolio assessment (10%).

2. **Task 2: Mid semester theory test.** A mid semester theory test will require you to sit a **50 minute** examination under supervision. You cannot refer to your module notes or workbook during the assessment. The scheduling of the assessments is shown in the study timetable.

3. **Task 3: Practical Exam.** The final practical examination will consist of a supervised **three hour** exam to be conducted in the last teaching week of semester 1.

4. **Task 4: Final Theory Exam.** The final theory examination will consist of a supervised **two hour** paper to be conducted during the official university examination period. This will be a closed book exam. No notes or books will be allowed into the examination room.
EXAMINATIONS
End of semester theory examination will be one paper held in the official examination period. Practical examinations and a mid semester theory test will be conducted as per attached schedule.

Late penalties
Students are expected to submit each assessment on or before the due deadline date. Failure to do so will result in a 10% penalty per calendar day (e.g. 10% per day off the 'total' marks available – an assignment worth 25 marks will lose 2.5 marks every day it is late). An assignment more than 7 days overdue will not be marked.

Pass requirements
Students should note that a mark of 50% or more in both the theoretical and practical component of the unit is required in order to secure a pass, and that failure in any one area may result in an overall failure in this unit regardless of the total marks accrued. That is, a pass in the practical component but failure in the theory component (or vice versa) may lead to a fail grade for the unit, even though the student's total mark may exceed 50%. In accordance with Curtin policy, students are advised that this unit is a SIGNIFICANT UNIT in which failure twice may lead to termination of a student’s course.

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 to correct minor problems/deficiencies in the initial assessment and not to gain extra study time or correct major problems. Only one supplementary examination may be awarded to a student each semester 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 online only on the official Curtin communication channel. It is your responsibility to check your status. 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.
Plagiarism

Plagiarism occurs when work or property of another person is presented as one's own, without appropriate acknowledgement or referencing. Plagiarism is a serious offence. For more information refer to academicintegrity.curtin.edu.au

Plagiarism Monitoring

Work submitted may be subjected to a plagiarism detection process, which may include the use of systems such as 'Turnitin'. For further information see http://academicintegrity.curtin.edu.au/students/turnitin.cfm.

Additional information

Enrolment:

It is your responsibility to ensure that your enrolment is correct - you can check your enrolment through the eStudent option on OASIS, where you can also print an Enrolment Advice.

Supplementary/Deferred Exams:

Supplementary and deferred examinations granted by the School of Biomedical Sciences will be held [INSERTCALENDAR WEEK HERE]. Notification to students will be made after the [INSERT SCHOOL OR FACULTY HERE] Board of Examiners meeting via the Official Communications Channel (OCC) in OASIS. It is the student’s responsibility to check their OASIS account for official Curtin correspondence on a weekly basis. If your results show that you have been awarded a supplementary or deferred exam you should immediately check your OASIS email for details.

Student Rights and Responsibilities

It is the responsibility of every student to be aware of all relevant legislation and policies and procedures relating to his or her rights and responsibilities as a student. These include:

- the Student Charter
- the University's Guiding Ethical Principles
- the University's policy and statements on plagiarism and academic integrity
- copyright principles and responsibilities
- the University’s policies on appropriate use of software and computer facilities

Information on all these things is available through the University’s “Student Rights and Responsibilities” website at: students.curtin.edu.au/rights.

Recent unit changes

We welcome feedback as one way to keep improving this unit. Students are encouraged to give unit feedback through eVALUate, Curtin’s online student feedback system (see http://evaluate.curtin.edu.au/info/index.cfm).
<table>
<thead>
<tr>
<th>Week</th>
<th>Date Monday</th>
<th>Lecture Tues 108.102 5-6pm</th>
<th>Practical - Tuesday</th>
<th>Lecture Wed 201.413 8-9am</th>
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<tbody>
<tr>
<td>1</td>
<td>28/2</td>
<td>H1-JJ</td>
<td>Laboratory Orientation Finalising Student Group Numbers</td>
<td>TS1-WT</td>
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<tr>
<td>2</td>
<td>7/3</td>
<td>H2-JJ</td>
<td>TP 1/CS 1</td>
<td>TS2-WT</td>
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<tr>
<td>3</td>
<td>14/3</td>
<td>H3-JJ</td>
<td>TP 2/CS 2</td>
<td>TS3-WT</td>
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<td>21/3</td>
<td>H4-JJ</td>
<td>TP 3/CS 3</td>
<td>TS4-WT</td>
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<td>28/3</td>
<td>H5-JJ</td>
<td>TP 4/CS 4</td>
<td>Theory Test</td>
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<td>6</td>
<td>4/4</td>
<td>Theory review</td>
<td>TP 5/CS 5</td>
<td>TS5-WT</td>
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<tr>
<td>7</td>
<td>11/4</td>
<td>H6-JJ</td>
<td>TP 6/CS 6</td>
<td>TS6-WT</td>
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<tr>
<td>8</td>
<td>18/4</td>
<td>H7-JJ</td>
<td>TP 7/CS 7</td>
<td>TS7-WT</td>
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<tr>
<td>9</td>
<td>25/4</td>
<td>WEEK FREE</td>
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<td></td>
</tr>
<tr>
<td>10</td>
<td>2/5</td>
<td>C1-JJ</td>
<td>CP 1/CS 8</td>
<td>H8-JJ</td>
</tr>
<tr>
<td>11</td>
<td>9/5</td>
<td>C2-JJ</td>
<td>CP 2/CS 9</td>
<td>H9-JJ</td>
</tr>
<tr>
<td>12</td>
<td>16/5</td>
<td>C3-JJ</td>
<td>CP 3/TP 8/CS 10 Practical Assessment</td>
<td>H10-KS</td>
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<tr>
<td>13</td>
<td>23/5</td>
<td>C4-JJ</td>
<td>Theory and Prac Review</td>
<td>H11-GR</td>
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<tr>
<td>30/5</td>
<td></td>
<td>Study Week</td>
<td></td>
<td></td>
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<tr>
<td>6/6-17/6</td>
<td></td>
<td>Examinations</td>
<td></td>
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</table>

H = Haematology Lecture  C = Coagulation Lecture  TS = Transfusion Science Lecture  
CS = Case Studies/Tutorial/Films/Blood counts  CP = Coagulation Practical  TP = Transfusion Science Practical
## Haematology 331 Semester 1 2011

### Haematology Lectures
1. Approach to anaemia diagnosis  JJ  
2. Iron deficiency anaemia  JJ  
3. Macrocytic anaemias  JJ  
4. Haemolytic Anaemia – erythrocyte survival defects  JJ  
5. Thalassaemia  JJ  
6. Haemoglobinopathies  JJ  
7. Haemopoiesis and Neoplastic disorders  JJ  
8. Myeloproliferative Disease  JJ  
9. Myelodysplastic Disease  JJ  
10. Cellular phenotyping and flowcytometry  KS  
11. Molecular techniques  GR

### Transfusion Science lectures
1. Blood products and transfusion practice 1  WT  
2. Red cell immunology  WT  
3. ABO, Lewis, I and P antigens and antibodies  WT  
4. Rh Blood group system antigens and antibodies  WT  
5. Other Blood group systems  WT  
6. Resolving complex antibody mixtures  WT

### Coagulation lectures
1. Coagulation factors  JJ  
2. Coagulation pathways  JJ  
3. Coagulation screening tests  JJ  
4. Approach to laboratory diagnosis  JJ

JJ  Mr Jeff Jago  9266 2345  
WT Mr Wally Tarnowski  
KS Ms Kerryn Stoner  
GR Ms Giuliana Romeo

Haematology Laboratory  
Dr Gerardine Pinto  9266 7465
HAEMATOLOGY 331  2011 SEMESTER 1  PRACTICAL PROGRAM

Delivered over 10 x 3 hour/week laboratory sessions

COAGULATION PRACTICALS
1. Coagulation screening tests
2. Monitoring anticoagulant therapy
3. Coagulation screening tests

TRANSFUSION SCIENCE PRACTICALS
1. ABO & Rh grouping and screening tests
2. Grouping & compatibility testing
3. Grouping & compatibility testing
4. Normal & variant ABO grouping (sub-grouping)
5. Rhesus genotyping
6. Solid phase methods
7. Compatibility testing & antibody identification
8. Compatibility testing

FILM/CASE REVIEWS - On-Line

<table>
<thead>
<tr>
<th>CASES</th>
<th>TO BE COMPLETED ON OR BEFORE</th>
<th>TUTORIAL REVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 - 10</td>
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<tr>
<td>10 - 15</td>
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</tr>
</tbody>
</table>

These films/cases are to be completed in your own time and will reviewed in tutorial sessions during Monday practical sessions. Please see Haematology Laboratory notice board for times the laboratory is vacant.