



Course Outline (Higher Education)

School:	School of Science, Psychology and Sport
Course Title:	HISTOPATHOLOGY AND HAEMATOLOGY
Course ID:	SCMED3034
Credit Points:	15.00
Prerequisite(s):	(SCMED2010 or SCMED2011)
Co-requisite(s):	Nil
Exclusion(s):	(SCMED3032 and SCMED3033)
ASCED:	060113

Description of the Course :

The purpose of this course is to develop a detailed understanding of the histopathology and haematology discipline specifically relevant to routine diagnostic pathology and haematology environments. The course focuses on patient diagnosis based on the knowledge, practical and technical skills relevant to the field. The course content is primarily focused on (1) histological techniques with an emphasis on tissue preparation and the role of specific techniques in the diagnosis process and (2) diagnosis of blood cell disorders including anaemia, leukaemia, blood coagulation and bleeding disorders.

Grade Scheme: Graded (HD, D, C, etc.)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory	■	■	■	■	■	■
Intermediate	■	■	■	■	■	■
Advanced	■	■	✓	■	■	■

Learning Outcomes:**Knowledge:**

- K1.** Discuss the key processes of fixation, tissue dissection, processing, embedding, microtomy and staining of paraffin-embedded solid tissue, as well as the blood film procedure.
- K2.** Describe key normal organ histology at a microscopic level.
- K3.** Relate immunohistochemical staining to the identification of pathology.
- K4.** Discuss the theoretical basis of flow cytometry and the interpretation of flow cytometry data.
- K5.** Identify cell types found in peripheral blood and explain the importance of erythropoiesis and hematopoiesis in human health and disease.
- K6.** Relate diagnostic analyses of blood to normal and abnormal conditions (e.g. anaemias), white blood cell normal and abnormal conditions (e.g. leukaemia) and platelet normal and abnormal conditions (e.g. disseminated intravascular coagulation and thrombocytopenia).

Skills:

- S1.** Demonstrate a variety of routine histological and haematological practices including procedures of dissection, embedding, cutting solid tissue, separation of blood cells, preparation of blood films, and staining.
- S2.** Develop inquiry and problem solving skills within a theoretical and practical context by collecting and accurately recording and interpreting health and disease data (e.g. histology, blood film, bone marrow, flow cytometry and biochemistry data).
- S3.** Select and apply appropriate practical and theoretical techniques in order to conduct an investigation relevant to histopathology and the diagnosis of a haematological condition.

Application of knowledge and skills:

- A1.** Design a course of action that demonstrates initiative, judgement, problem solving and decision making relevant to patient diagnosis and health outcomes based on scenario applications.
- A2.** Devise a variety of static and non-static responses to scenario applications which combine features of general pathology, structure and function of human tissue and diagnosis of disease.
- A3.** Appreciate histopathology diversity with regards to histology in context with diagnostic and forensic tissue specimens.
- A4.** Apply quality assurance procedures and safety procedures to a histological laboratory.

Course Content:

Topics may include:

- Major Unit 1: Pathology lab safety, solid tissue fixation, tissue cut-up, processing, embedding and microtome, routine staining, special staining for connective tissue and immunohistochemistry.
- Major Unit 2: Knowledge of preparation of blood samples for blood films and flow cytometry, erythropoiesis and anaemia diagnosis, leukaemia diagnosis, platelet, blood coagulation, haemostasis, and diagnosis of thrombosis and bleeding disorders.

Values:

- V1.** Professional autonomy, confidentiality and accountability in the field of histopathology and haematology.
- V2.** Importance of professional relationships within the medical environment.

- V3.** Identification and assessment of health and social care needs of patients who have undergone a biopsy procedure or a procedure related to haematology.
- V4.** Critical evaluation of the impact of routine histopathology and haematology practices on patient well-being.

Graduate Attributes

The Federation University FedUni graduate attributes (GA) are entrenched in the Higher Education Graduate Attributes Policy (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course			
		Learning Outcomes (KSA)	Code A. Direct B. Indirect N/A Not addressed	Assessment task (AT#)	Code A. Certain B. Likely C. Possible N/A Not likely
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1, K4-5, S1, A2-3	A, A, A, B, B, A	AT1, AT3, AT4	A, A, B
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	K3,S2-3, A1	A, B, A, B	AT4	A
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	K1, K4, S3, A3	B, A, B, A	AT2	B
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	K2,K6, A4	A, B, B	AT2, AT3, AT4	A, B, B
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	K1, K2	A, A	AT1	B

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1-K6, S1-S3, A1-A3	These assessments assess knowledge and the application of the knowledge utilising a range of healthy tissues and patient data, and using interpretation skills to determining a patient diagnosis.	Tests	40-60%
S1-S3, A1-A2, A4	Presentation of procedures and techniques captured and explained by digital media techniques	Practical portfolio: Digital media presentations	10-20%
S1-S3	Written report on outcomes of practical techniques	Report of relevant practical knowledge	10-20%
S1-S3, A1-A3	Written responses to scenario applications involving both theoretical and practical knowledge	Scenario applications	15-25%

Adopted Reference Style:

Australian Harvard