

# PH8008: MULTIPLANAR ANATOMY

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## Effective Term

Semester A 2025/26

## Part I Course Overview

### Course Title

Multiplanar Anatomy

### Subject Code

PH - Infectious Diseases and Public Health

### Course Number

8008

### Academic Unit

Infectious Diseases and Public Health (PH)

### College/School

Jockey Club College of Veterinary Medicine and Life Sciences (VM)

### Course Duration

One Semester

### Credit Units

3

### Level

R8 - Research Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Nil

### Precursors

Nil

### Equivalent Courses

Nil

### Exclusive Courses

Nil

## Part II Course Details

### Abstract

Multiplanar reformation or reconstruction involves the process of acquiring defined diagnostic slices of information from volumetric data achieved during the diagnostic imaging examination. This common use of volumetric data for multiplanar

reconstruction explains the flexibility and demonstration of multiplanar anatomy across other diagnostic imaging modalities capable of cross-sectional imaging. The subject aims to deliver a concise course of human regional anatomy to the students and to train students to recognise the normal and abnormal anatomical features by using multiplanar diagnostic imaging modalities in the clinical and research settings. Using computer software, there are practical sessions that allow students to review the 3D relationship between anatomical structures.

### Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Integrate systemic anatomy and regional anatomy with sound knowledge	x		
2	Identify anatomical features from medical images of various body planes	x		
3	Review the 3D reconstruction of body structures from a series of planar images	x		
4	Discuss common abnormal anatomy in medical images		x	x
5	Compare and evaluate the use of various imaging modalities for viewing a structure or a region in research and clinical settings		x	x

#### A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

#### A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

#### A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

### Learning and Teaching Activities (LTAs)

LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Students will be introduced to the fundamental human regional anatomy, and integrate the knowledge with diagnostic imaging anatomical features including diagnostic imaging modalities such as General Radiography, Computed Tomography, Magnetic Resonance Imaging, Ultrasonography in research and clinical settings through lectures.	1, 2, 3

2	Tutorial and/or case studies	Student will participate in tutorial and/or case study sessions, which involve in-class interactive discussions, analyses and 3D reconstruction of body structures activities to facilitate their better understanding on concepts studied during the classes and self-directed learning after classes.	1, 2, 3	
3	Hands-on practical tasks and reporting	Students will engage in hands-on group activities that will be conducted to facilitate conceptual mastery of identification and reconstruction of anatomical features in various medical images taken from 5 anatomical regions for research and clinical practice. Take-home report for anatomical feature reconstruction and labelling will also be assigned.	2, 3, 4, 5	
4	Examination	Examination will be arranged to assess students' understanding and ability to apply subject-related knowledge learned in class, textbooks and required reading materials.	2, 3, 4, 5	

**Assessment Tasks / Activities (ATs)**

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	In-class Activities In-class activities will assess the students' ability to recognize basic sectional anatomy. Students are required to participate actively in activities and complete the coursework assigned.	1, 2, 3, 4, 5	10	-	Yes

2	Practical Report The student will be provided with medical images taken from 5 anatomical regions (thorax, abdomen, pelvis, extremities and head & neck) and 3 anatomical planes (axial, coronal and sagittal). Using any DICOM viewer, the student is expected to select representative images from the files provided and label them with correct anatomical terms.	3, 4, 5	20	-	Yes
3	Group Presentation Project Students should select one anatomical region/system/organ and discuss the benefits of multiplanar anatomical views in facilitating imaging diagnosis.	1, 2, 3, 4, 5	40	-	Yes

**Continuous Assessment (%)**

70

**Examination (%)**

30

**Examination Duration (Hours)**

2

**Minimum Continuous Assessment Passing Requirement (%)**

40

**Minimum Examination Passing Requirement (%)**

40

**Assessment Rubrics (AR)****Assessment Task**

1. In-class Activities

**Criterion**

1.1 Ability to examine the technical knowledge on multiplanar anatomy.

1.2 Ability to work effectively in a team while influencing others to achieve results.

**Excellent**

Excellent knowledge in multiplanar anatomy and very enthusiastic participation in class discussion.

**Good**

Significant knowledge in multiplanar anatomy and active participation in class discussion.

**Fair**

Moderate knowledge in multiplanar anatomy and some participation in class discussion.

**Marginal**

Basic knowledge in multiplanar anatomy and inadequate participation in class discussion.

**Failure**

Poor knowledge in multiplanar anatomy and very limited participation in class discussion.

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**Assessment Task**

2. Practical Report

**Criterion**

2.1 Capacity to value

**Excellent**

Excellent analytic skills to examine the knowledge to demonstrate in-depth understanding of the applications of multiplanar anatomy.

**Good**

Significant analytic skills to examine the knowledge to demonstrate good understanding of the applications of multiplanar anatomy.

**Fair**

Moderate analytic skills to examine the knowledge to demonstrate adequate understanding of the applications of multiplanar anatomy.

**Marginal**

Basic analytic skills to examine the knowledge to demonstrate some understanding of the applications of multiplanar anatomy

**Failure**

Poor analytic skills to examine the knowledge and is barely able to demonstrate an understanding of the applications of multiplanar anatomy.

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**Assessment Task**

3. Group Presentation Project

**Criterion**

3.1 Ability to develop plans to apply

3.2 Ability to work effectively in a team while influencing others to achieve results.

**Excellent**

Excellent presentation skills to demonstrate in-depth applications of multiplanar anatomy techniques as a great team work.

**Good**

Significant presentation skills to demonstrate good applications of multiplanar anatomy techniques as a good team work.

**Fair**

Moderate presentation skills to demonstrate adequate applications of multiplanar anatomy techniques as some team work.

**Marginal**

Basic presentation skills to demonstrate some applications of multiplanar anatomy techniques with inadequate team work.

**Failure**

Poor presentation skills to demonstrate applications of multiplanar anatomy techniques with very limited team work.

**Assessment Task**

## 4. Examination

**Criterion**

4.1 Ability to examine the technical knowledge on multiplanar anatomy.

**Excellent**

Excellent knowledge in multiplanar anatomy and result in examination.

**Good**

Significant knowledge in multiplanar anatomy and result in examination.

**Fair**

Moderate knowledge in multiplanar anatomy and result in examination.

**Marginal**

Basic knowledge in multiplanar anatomy and result in examination.

**Failure**

Poor knowledge in multiplanar anatomy and result in examination.

**Part III Other Information****Keyword Syllabus**

Multiplanar reconstruction, Anatomy, Diagnostic imaging modalities, 3D reconstruction

**Reading List****Compulsory Readings**

	Title
1	Abrahams PH, Spratt JD, Loukas M, van Schoor AN. McMinn and Abrahams' Clinical Atlas of Human Anatomy (8th Edition). Elsevier, 2019.
2	Weir J. Imaging Atlas of Human Anatomy (4th Edition). Edinburgh: Mosby Elsevier, 2010.
3	Kelley LL and Petersen CM (3rd Edition). Sectional Anatomy for Imaging Professionals. Mosby, 2012.

**Additional Readings**

	<b>Title</b>
1	Other Radiology/Radiography Journals and online references.