

## Course specification

### RARD 528 Basic and Radiological Imaging of Anatomy and Physiology

Institute Name: Mahidol University

Campus/Faculty/Department: Faculty of Medicine, Ramathibodi Hospital, Department of Diagnostic and Therapeutic Radiology

#### Section 1: General information

1. Course number and name

Course number: RARD 528

Course name: Basic and Radiological Imaging of Anatomy and Physiology

2. Credits: 1 (1-0-2)

3. Curriculum and type of course

3.1 Curriculum: Basic and Radiological Imaging of Anatomy and Physiology

3.2 Type of course: Pre-requisite course

4. Instructors

4.1 Course Coordinator: Lect. Dr. Putthiporn Charoenphun (PC)

4.2 Instructors:

Lect. Dr. Somchai Yanrojana (SY)

Medical Doctor staff (MD)

5. Semester/Year: Summer, 1<sup>st</sup> year student

6. Pre-requisite: None

7. Co-requisite: None

8. Classroom: To be announced

9. Revision Date: 20<sup>th</sup> November 2019 By: Committee

#### Section 2: Purpose and Objective

1. Course Learning Outcome

1.1 Be able to develop a vocabulary of appropriate terminology to effectively communicate information to anatomy and physiology.

1.2 Be able to recognise the anatomical structures and explain the physiological functions of body systems.

- 1.3 Be able to recognise and explain the principle of homeostasis and the use of feedback loops to control physiological systems in the human body.
- 1.4 Be able to relate knowledge of anatomy and physiology to delineate in medical images from range of modalities.
- 1.5 Be able to recognise anatomical structures on radiological images.

Section 3: Course details

1. Course description

Major principles in anatomy and physiology, structures and functions of different systems of the human body, anatomy and physiology as delineated in radiological images, normal medical imaging appearance of anatomical structures, their functions and their relationships as demonstrated in radiological imaging.

2. Hours per semester: Lecture 15 hours

Section 4: Course Learning Outcomes

<b>Course level learning outcomes</b>	<b>Programme level learning outcomes</b>	<b>Methods</b>	<b>Assessment</b>
1. Develop a vocabulary of appropriate terminology to effectively communicate information to anatomy and physiology	ELO 2	- Lecture	- Paper examination
2. Recognise the anatomical structures and explain the physiological functions of body systems	ELO 2	- Lecture	- Paper examination
3. Recognise and explain the principle of homeostasis and the use of feedback loops to control physiological systems in the human body	ELO 2	- Lecture	- Paper examination
4. Relate knowledge of anatomy and physiology to delineate in medical images from range of modalities	ELO 2	- Lecture	- Paper examination
5. Recognise anatomical structures on radiological images	ELO 2	- Lecture	- Paper examination

## Section 5: Lesson plan and assessment

### 1. Lesson plan

<b>Time</b>	<b>Topic</b>	<b>Instructor</b>	<b>Method</b>	<b>Assessment</b>
1.5 h	Introduction to anatomical terms and regions of the body	SY	- Lecture	- Paper examination
1.5 h	Tissues, bones, joints and muscles	SY	- Lecture	- Paper examination
1 h	Nervous system	SY	- Lecture	- Paper examination
1.5 h	Cardiovascular system and respiratory system	SY	- Lecture	- Paper examination
1.5 h	Gastrointestinal system, excretory system	SY	- Lecture	- Paper examination
1 h	Endocrine system	SY	- Lecture	- Paper examination
2 h	Radiological imaging of head, neck and spine	MD	- Lecture	- Paper examination
2 h	Radiological imaging of the body	MD	- Lecture	- Paper examination
1.5 h	Radiological imaging of cardiovascular system	MD	- Lecture	- Paper examination
1.5 h	Radiological imaging of musculoskeletal system	MD	- Lecture	- Paper examination

2. Measurement and evaluation of student achievement

2.1 Paper examination 90%

2.2 Class attendance 10%

Section 6: Assessment and improvement of the course operation

1. Strategy to assess the effectiveness of the course by the students
  - Assessment of the course by student
2. Strategy to assess the instruction
  - Assessment of student's learning records
  - Assessment of instructor's teaching by student
3. Improvement of instruction
  - Consider the students' learning records
  - Consider the students' assessment of instructor's teaching
  - Consider the program committee's comment
4. Verification of student achievement in the subject
  - By program committee and faculty-level academic committee
5. Review and action plan to improve the effectiveness of the course
  - Using the results from 1-4 as inputs to the instruction improvement