Course specification

RARD 588: Research Methodology

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 588

Course name: Research Methodology

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

3. Curriculum and type of course

3.1 Curriculum: Research methodology

3.2 Type of course: Core course

4. Instructors

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

Asst. Prof.Dr.Sawwanee Asavaphatiboon (SA)
Lect. Dr.Puangpen Tangboonduangjit (PT)
Lect. Dr.Krisanat Chuamsaamarkkee (KC)
Asst. Prof.Dr.Supakajee Saengruangorn (SS)

- 5. Semester/Year: 2nd Semester, 1st year student
- 6. Pre-requisite: None
- 7. Co-requisite: None
- 8. Classroom: To be announced
- 9. Revision Date: 20th November 2019 By: Committee

Section 2: Purpose and Objective

- 1. Course Learning Outcome
 - 1.1 Be able to understand and apply research concepts, techniques and process.
 - 1.2 Be able to interpret published research evidence in order to obtain the research problem/issue for further investigation.
 - 1.3 Be able to conduct the research study using suitable methodologies.

- 1.4 Be able to present research and experiment plans as a written proposal using relevant theories.
- 1.5 Be able to consider ethical and logistic issuesin research.
- 1.6 Be able to present designed research.

Section 3: Course details

1. Course description

Introduction to research and research ethics, literature survey, presenting a scientific issue, oral presentation, management and presentation skills, poster presentation, writing research proposal, present designed project

2. Hours per semester: Lecture 6 hours Presentation 9 hours

Section 4: Course Learning Outcomes

Course level learning outcomes	Programme level	Methods	Assessment
	learning outcomes		
Understand and apply research concepts, techniques and process	ELO 2	- Lecture - Presentation	- Rubric presentation
2. Interpret published research evidence in order to obtain the research problem/issue for further investigation	ELOs 2, 3	- Practice - Presentation	- Rubric presentation - Rubric report
3. Conduct the research study using suitable methodologies	ELOs 2, 3, 4	Writing reportPresentation	- Rubric presentation
4. Present research and experiment plans as a written proposal using relevant theories	ELOs 4, 5	- Writing report	- Rubric report
5. Consider ethical and logistic issues in research	ELO 1	Anti-plagiarismcheckPresentation	- Pass the anti- plagiarism - Rubric presentation
6. Present designed research	ELO 5	PresentationClass discussionand participation	- Rubric presentation

Section 5: Lesson plan and assessment

1. Lesson plan

Time	Topic	Instructor	Method	Assessment
2 h	Introduction to research and research ethics, literature survey	PC/ SS	- Lecture - Group discussion	- Q&A, feedback
2 h	Presenting a scientific issue, oral presentation, management and presentation skills, poster presentation	PC/ SS	- Lecture - Group discussion	- Q&A, feedback
2 h	Writing research proposal	PC/ SS	- Lecture - Written research proposal	- Rubric report
9 h	Present designed project	All staff member	- Presentation- Group discussion	- Rubric presentation - Participation

2. Measurement and evaluation of student achievement

2.1 Written research proposal
2.2 Presentation
2.3 Class participation
20%

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