



## Course Specification

### BPH 1203 Microbiology and Parasitology

College of Allied Health Sciences

Suan Sunandha Rajabhat University

The 2<sup>nd</sup> semester of 2022

### Part 1 General information

#### 1. Code and subject

Code BPH1203  
Subject Microbiology and Parasitology

#### 2. Credits 3 (3-3-7)

#### 3. Course and group of subjects

3.1 Course B.Sc. (Public Health)  
3.2 Group of subjects Specific subject

#### 4. Primary instructors and teacher

4.1 Primary instructors Assoc. Prof. Dr. Duangporn Nacapunchai, MD  
Aj. Anantachai Inthiraj  
Dr. Roongtawan Muangmoon

#### 5. Contact

College of Allied Health Sciences,  
Suan Sunandha Rajabhat University

#### 6. Semester/ academic year

6.1 Semester The 2<sup>nd</sup> semester of 2022  
6.2 Number of students 120 persons

7. Pre-requisite	None
8. Co-requisites	None
9. College	College of Allied Health Sciences Samut Songkram Education Center Suan Sunandha Rajabhat University
10. Date of revision	November 1, 2022

## Part 2 Target and objective

### 1. Target of the subject

1. Define microbiology, parasitology, pathogen, nonpathogen and opportunistic pathogen
2. Define microorganisms and list several examples of each
3. List several reasons why microbes are important
4. Explain the relationship between microbes and infectious disease

### 2. Objective

Morphology, life circle and classification of bacteria, fungus, virus, parasite; infectious, emerging, and re-emerging diseases which is common in medicine and public health, virulence factors, transmission and pathogenesis; principle of infectious diseases investigation; prevention, control and elimination of microbes; disease resistance process; infectious preventions and control; disinfection and inhabitation in microorganism and parasite

### Part 3 Specifications and teaching details

#### 1. Subject specifications of BPH1203 Microbiology and Parasitology

Morphology, life circle and classification of bacteria, fungus, virus, parasite; infectious, emerging, and re-emerging diseases

#### 2. Teaching hours per semester

Lecture (hours)	Tutorial (hours)	Practice (hours)	Self-study
48	According to the needs of specific students and group agreements.	48	112

#### 3. Consultation and additional tutorial

3.1 Personal consultation at the teacher's office on the 5<sup>th</sup> floor

3.2 Phone consultation 090-670-6663

3.3 E-mail [Duangporn.na@ssru.ac.th](mailto:Duangporn.na@ssru.ac.th)

[Anantachai.in@ssru.ac.th](mailto:Anantachai.in@ssru.ac.th)

[Roongtawan.mu@ssru.ac.th](mailto:Roongtawan.mu@ssru.ac.th)

3.4 Social media Line and Facebook

### Part 4 Outcome evaluation

#### 1. Moral and ethic

##### 1.1 Moral and ethics development

(1) Decision making with value and reasonable to social rules

(2) Discipline, responsibility, reliability, honest sacrifice

## 1.2 Method

- (1) Lecture with 2-ways communication with example
- (2) Group assignment with presentation
- (3) Laboratory
- (4) Late arrival is 15 min with agreement of punishment

## 1.3 Evaluation

Observe desirable behavior. There is an increase in numbers such as on-time attendance, dress code according to the date of the exam, the availability of participation or the activities of students. Responsibility, duties, etc.

## 2. Knowledge

### 2.1 Knowledge development

1. Compare and contrast the differences among bacteria, virus, algae, protozoa, fungi and nematode (e.g., photosynthetic ability, chitin in cell walls, etc.)
2. List five major infectious diseases of humans that are caused by bacteria, virus, algae, protozoa, fungi and nematode
3. Define and state the importance of phycotoxins and mycotoxins

### 2.2 Method

- (1) Student-focused teaching focuses on students' knowledge and understanding of microbiology and parasitology
- (2) Social Network and Websites
- (3) e-Learning

### 2.3 Evaluation

- (1) Midterm examination
- (2) final examination
- (3) Class participation and discussion
- (4) Laboratory

### 3. Intellectual skill

#### 3.1 Intellectual skill development

- (1) Can be searched It is used to identify and analyze complex problems on their own.
- (2) Can apply and integrate knowledge and related aspects. Use professional skills
- (3) It can be used at the discretion to resolve problems and to suggest new approaches in various situations.

#### 3.2 Method

- (1) Collaborative discussion teaching
- (2) Classroom Practice
- (3) Teaching using case studies, problem issues, supplementary activities

#### 3.3 Evaluation

- (1) Midterm exams and Final exams using case studies or problem problems.
- (2) Reporting of research results by presenting a class page and a report document.
- (3) Evaluation based on the actual condition of the assigned work.

### 4. Interpersonal relationship skill and responsibility

#### 4.1 Interpersonal relationship skill and responsibility development

- (1) Good human relations, able to work with others and adapt to the situation and culture of the organization.
- (2) Be able to effectively perform and take responsibility for the assigned tasks.
- (3) Be creative, can assist and facilitate situation solving in the role of leader or in the role of a colleague.
- (4) Responsible for knowledge development their professional ability to continuously

#### 4.2 Method

Use a teaching that has an activity assigned to a group task.

#### 4.3 Evaluation

- (1) Assignment presentation
- (2) Team participation observation
- (3) To participate in the evaluation of students.

## 5. Numerical analysis, communication and intellectual skill

### 5.1 Numerical analysis, communication and intellectual skill development

- (1) Able to understand effectively in Laboratory
- (2) Skilled in using quantitative in Laboratory

### 5.2 Method

- (1) Lecture
- (2) Case study and presentation
- (3) Laboratory

### 5.3 Evaluation

Use the assigned assessment model with the criteria for evaluating laboratory

## Part 5 Teaching plan and assessment

## 1. Evaluation

Activities	Method	Week	Quotation
1	Observing behavior and results during the course	1-15	10
2	Midterm examination	10	30
3	Final examination	17	40
4	Laboratory assignment	12	10
5	Group assignment	6	10

## Grading evaluation according to Suan Sunandha Rajabhat University

Grade	Range	Score
A	86-100	4.00
A-	82-85	3.75
B+	78-81	3.50
B	74-77	3.00
B-	70-73	2.75
C+	66-69	2.50
C	62-65	2.00
C-	58-61	1.75
D+	54-57	1.50
D	50-53	1.00
D-	46-49	0.75
F	0-45	0.00



## Teaching plan

Week	Topics	Teaching hours	Teaching Activities	Instructor(s)
1	Introduction to Microbiology - Microbiology -Using the metric system	3/3	- Lecture & Lab - PowerPoint - Discussion	Assoc. Prof. Dr. Duangporn Aj. Anantachai Dr. Roongtawan
2	Chemical and genetic aspects of microorganisms -Microbial physiology -Metabolic enzymes -Metabolism -Bacterial genetics -Genetic engineering -Gene therapy	3/3	- Lecture & Lab - PowerPoint - Discussion	Dr.Roongtawan
3	Bacterial infections - Skin - Ears - Eyes - Respiratory system - Oral region - Gastrointestinal tract - Genitourinary system	3/3	- Lecture & Lab - PowerPoint - Discussion	Dr.Roongtawan
4	Bacterial infections -Circulatory system -Central nervous system	3/3	- Lecture & Lab - PowerPoint - Discussion	Dr.Roongtawan

	<ul style="list-style-type: none"> <li>-Diseases caused by anaerobic bacteria</li> <li>-Diseases associated with biofilms</li> <li>-Recap of major bacterial infections of humans</li> <li>-Appropriate therapy for bacterial infections</li> </ul>			
5	<p>Fungal infections</p> <ul style="list-style-type: none"> <li>-Classification of fungal disease</li> <li>- Fungal infections <ul style="list-style-type: none"> <li>-skins</li> <li>- respiratory system</li> <li>-oral region</li> <li>-genitourinary system</li> <li>-circulatory system</li> <li>-central nervous system</li> </ul> </li> <li>-Recap of major fungal infections of humans</li> <li>-Appropriate therapy for fungal infections</li> </ul>	3/3	<ul style="list-style-type: none"> <li>- Lecture &amp; Lab</li> <li>- PowerPoint</li> <li>- Discussion</li> </ul>	Dr.Roongtawan
6.	<p>Viral infections</p> <ul style="list-style-type: none"> <li>-Skin</li> <li>-Ears</li> <li>-Eyes</li> <li>-Respiratory system</li> <li>-Oral region</li> </ul>	3/3	<ul style="list-style-type: none"> <li>- Lecture &amp; Lab</li> <li>- PowerPoint</li> <li>- Discussion</li> </ul>	Aj. Anantachai

	-Gastrointestinal tract			
7.	Viral infections - Genitourinary system - Circulatory system - Central nervous system -Recap of major viral infections of humans -Appropriate therapy for viral infections	3/3	- Lecture & Lab - PowerPoint - Discussion	Aj. Anantachai
8	Midterm examination			Assoc. Prof. Dr. Duangporn Aj. Anantachai Dr. Roongtawan
9	Practices for the Microbiology Laboratory	6	- Lecture & Lab - PowerPoint - Discussion	Aj. Anantachai
10	Introduction to Medical Parasitology	3/3	- Lecture & Lab - PowerPoint - Discussion	Assoc. Prof. Dr. Duangporn
11	Parasites of Digestive system (1)	3/3	- Lecture & Lab - PowerPoint - Discussion	Assoc. Prof. Dr. Duangporn
12	Parasites of Digestive system (2)	3/3	- Lecture & Lab - PowerPoint - Discussion	Assoc. Prof. Dr. Duangporn
13	Parasites of Blood and Tissue	3/3	- Lecture & Lab - PowerPoint	Assoc. Prof. Dr. Duangporn

			- Discussion	
14	Ectoparasite	3/3	- Lecture & Lab - PowerPoint - Discussion	Assoc. Prof. Dr. Duangporn
๑๕	Final examination			Assoc. Prof. Dr. Duangporn Aj. Anantachai Dr. Roongtawan

## Section 6 Teaching material

### 1. Standard textbook

-Burton, Gwendolyn R.W. Microbiology for the health sciences. 9th edition:

New York: Lippincott Raren 2011.

-Nacapunchai D. Parasites. In Atlas of infectious diseases. 1st Ed Holistic publishing. Co., Ltd.

Thailand 2008. P185-223.

-Review of Medical Microbiology and Immunology, 11e (recommended)

<http://www.accessmedicine.com/resourceTOC.aspx?resourceID=771>

-Jawetz, Melnick, & Adelberg's Medical Microbiology, 25e

<http://www.accessmedicine.com/resourceTOC.aspx?resourceID=6>

### 2. Additional material

- Hand-out

## Section 7 Evaluation and subject development

### 1. Course efficiency evaluation by student

1.1 Conversations between instructors and learners

1.2 Instructor Assessment and Course Assessment

### 2. Teaching evaluation

Student's Academic Performance

### 3. Course development

3.1 Taught reviews by faculty members in the curriculum

3.2 Organize a conference to improve teaching

### 4. Standard evaluation of the subject by student

The course has a teaching evaluation committee that examines the achievements of students in the course by randomly assessing the exam and the suitability of the rating.

### 5. The plan for revaluation and improvement the subject efficiency

The course has a system to review the effectiveness of the course. Based on the results of the student's assessment of teaching. The results of the assessment by the Curriculum Assessment Committee Report on the course of the course (M.5) by the instructor After reviewing the effectiveness of the course, The instructor is responsible for reviewing the content taught. Strategies used to teach and provide guidelines for further improvement

## Curriculum Mapping according to Program Specification

Subject	1. Moral and ethic		2. Knowledge			3. Intellectual skill			4. Interpersonal relationship skill and responsibility			5. Numerical analysis, communication and intellectual skill		
	1	2	1	2	3	1	2	3	1	2	3	1	2	3
BPH1203 Microbiology and Parasitology	○	●	○	○	●	○	○	●	●	○	○	○	●	○