

Course Specification

Name of Institution: Prince of Songkla University
 Department/Faculty/Campus: Faculty of Nursing, Hat Yai Campus,

Section 1: General Information

1. Course code and title:

646-531 Advanced Pathophysiology and Pharmacology for Adults and Elders

2. Number of credits:3(3-0-6)

3. Program and course categories

Master of Nursing Science (International Program) (section 02)

Type of course

- ☒ Compulsory Course
☐ Area of Concentration Course
☐ Free Elective Course

4. Course Coordinators and Lecturers

Course Coordinators

1. Asst.Prof.Dr. Hathairat Sangchan
2. Assoc.Prof.Dr. Kittikorn Nilmammat

Lecturers

1. Asst.Prof.Dr. Hathairat Sangchan
2. Assoc.Prof.Dr. Kittikorn Nilmammat
3. Asst.Prof.Dr.Charuwan Kritpracha
4. Asst.Prof.Dr. Luppana Kitrungrrote
5. Asst.Prof.Dr. Chantra Promnoi
6. Asst.Prof.Dr. Kataporn Yoichai
7. Dr.Ratjai Vajprasit
8. Dr.Samonnann Tassaneesuwan
9. Assoc.Prof.Dr. Benjamas Janchawee
10. Asst.Prof.Dr. Thitima Doung-ghean
11. Asst.Prof.Dr. Sukanya Daj-adisai
12. Assoc.Prof.Surasak Sangkatat Na Ayuthaya, MD.
13. Assoc.Prof.Pattarapim Sappaweravong, MD.
14. Assoc.Prof.Saranyoo Shoesri, MD.

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July 13, 2020 ✓

5. Semester/ Year/ Academic Year

1/1/2020

6. Pre-requisite Subject

☒ None

7. Co-requisites

☒ None

8. Location

Room 3401, 3rd Building Faculty of Nursing, Prince of Songkla University, Hat Yai Campus,

9. Last updated of the course details

27 June, 2020

Section 2: Purposes of the course

1. Purposes of the course

Students will demonstrate in-depth knowledge of pathophysiology of complicated diseases and principles of pharmacotherapy in adult and elderly patients.

After completion of this course, students will be able to:

- 1.1 describe principles of pharmacokinetics, pharmacodynamics, and pharmacotherapy in adult and elderly patients; and concept of rational drug use, herb, and chemotherapy
- 1.2 describe concepts of diseases, causes, and physiological alterations
- 1.3 analyze causes and physiological alterations of the assigned case

2. Objectives of a Course Revision

- 2.1 To enhance self-directed learning by increasing self-study, active participation in class and online, and using case-based learning
- 2.2 To update knowledge related to emerging disease
- 2.3 To revise learning outcome evaluation both formative and summative evaluation

Section 3: Description and Implementation

1. Course Description

Advanced concept of diseases' occurrence; causes of pathology; pathophysiological alterations in each organ; signs and symptoms; principles of pharmacology and pharmacotherapeutics; rational drug use

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2. Number of Hours per Semester

Lecture (hours/semester)	Practice (hours/semester)	Self-study (hours/semester)	Field Practice	Extra Classes
45	-	90	-	-

3. Number of hours per week for academic guidance to individual students

3.1 Course coordinators are available one hour on Monday and Tuesday for individual/group consultation or discussion if student needed. Please make appointment via e-mail 1 week in advance

Name	Time	e-mail address	Office No
Asst.Prof.Dr. Hathairat Sangchan	9.00-10.00 am.	hathairat.s@psu.ac.th	1107
Assoc.Prof.Dr. Kittikorn Nilmamat	9.00-10.00 am.	kittikorn.n@psu.ac.th	2225

3.2 Advisors of case analysis are available following allocated in the schedule or outside the schedule by appointments

Advisor Name	Case study	e-mail address	Office No
Dr.Samonnann	Cancer	samonnann@psu.ac.th	2220
Dr. Ratjai	Emerging infection	ratjai.v@psu.ac.th	1114 A
Asst.Prof.Dr.Charuwan	ACS / MI	charuwan.kr@psu.ac.th	1113
Assoc.Prof.Dr.Kittikorn	HIV/AIDS	kittikorn.n@psu.ac.th	2225
Dr.Samonnann	Respiratory Failure	samonnann@psu.ac.th	2220
Dr. Ratjai	Hyperglycemia / DKA	ratjai.v@psu.ac.th	1114 A
Asst.Prof.Dr. Luppna	IICP	lappna.k@psu.ac.th	2217
Asst.Prof.Dr. Chantra	Hepatic Failure	chantra.p@psu.ac.th	2219
Asst.Prof.Dr. Kataporn	Renal Failure	kataporn.y@psu.ac.th	1203
Asst.Prof.Dr.Hathairat	MODS	hathairat.s@psu.ac.th	1107

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Section 4: Learning Outcomes Development

Expected learning outcomes

1. Morality and Ethics

Morals and Ethics that need to be developed	Teaching Methods	Evaluation
1.3 Possess ethical behaviors following ethical standards of conducting research and academic work	<ul style="list-style-type: none"> - Assign to participate in every discussion by synchronized online / in classroom - Assignment works have citations and references following academic ethical standards - Case analysis report has citations and references following academic ethical standards 	<ul style="list-style-type: none"> - Evaluation of citations and references following academic ethical standards - Evaluation of citations and references following academic ethical standards (APA format) - Evaluation of citations and references of case analysis report following academic ethical standards (APA format), and have to be approved by Turnitin Program

Charuman Khyrae

July 13, 2020

2. Knowledge

Knowledge that needs to be obtained	Teaching methods	Evaluation
<p>2.1 Have knowledge advanced concept of diseases' occurrence; causes of pathology; pathophysiological alterations in each organ; signs and symptoms; principles of pharmacology and pharmacotherapeutics; rational drug use</p> <p>2.2 Apply knowledge related to advanced concept of pathophysiological alterations to analyse the assigned case study</p>	<ul style="list-style-type: none"> - Assign to self-study following the topic outlines which will be uploaded via LMS2@PSU - Assign to self-preparation for active participation in classroom /synchronized online - Assign class assignments 5 times - Assign to analyze case study by reviewing literature, self-study, analyze and compare case with theory related to pathophysiological alterations - Assign to presentation case analysis by mind mapping - Assign to write case analysis report 	<ul style="list-style-type: none"> - Evaluation of active participate in classroom / synchronized online - Evaluation content of assignments - Evaluation of mind mapping of case analysis - Evaluation of case analysis presentation - Evaluation of case analysis report

3. Intellectual skills

Intellectual skills that need to be developed	Teaching Methods	Evaluation
3.1 Analyze the assigned case study by advance concept of pathophysiological alterations and pharmacology	<ul style="list-style-type: none"> - Assign class assignments 5 times - Assign to analyze case study by reviewing literature, self-study, analyze and compare case with theory related to pathophysiological alterations - Assign to presentation case analysis by mind mapping - Assign to write case analysis report 	<ul style="list-style-type: none"> - Evaluation content of assignments - Evaluation of mind mapping of case analysis - Evaluation of case analysis presentation - Evaluation of case analysis report

Charuwan Krittpranhe

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4. Interpersonal skills and responsibilities

Interpersonal skills and responsibilities that need to be developed	Teaching Methods	Evaluation
4.3 Be responsible in learning and self-development 4.4 Be competence in team working	<ul style="list-style-type: none"> - Assign to self-study following the topic outlines which will be uploaded via LMS2@PSU - Assign to self-preparation for active participation in classroom /synchronized online - Assign class assignments 5 times - Assign to analyze case study by reviewing literature, self-study, analyze and compare case with theory related to pathophysiological alterations - Assign to presentation case analysis by mind mapping - Assign to write case analysis report 	<ul style="list-style-type: none"> - Evaluation on active participation in classroom/synchronized online - Evaluation of responsibility to submit assignment - Evaluation of team working

5. Numerical, analytical, communication and information technology skills

Numerical, analytical, communication and information technology skills need to be developed	Teaching Methods	Evaluation
5.3 Use up-to-date information technology in self-learning in communicating informatics and the results of the study to academics and the public via channels, as well as academic and	<ul style="list-style-type: none"> - Assign to self-study via information technology and information systems such as LMS@PSU or other systems to communicate between lecturer and students 	<ul style="list-style-type: none"> - Evaluation of active participation via synchronized online

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Numerical, analytical, communication and information technology skills need to be developed	Teaching Methods	Evaluation
professional publications with standards	<ul style="list-style-type: none"> - Assign to search and study both Thai and English academic work - Assign to presentation of the report by using communication and listening skills 	<ul style="list-style-type: none"> - Evaluation of update of citations and references of assignment and report - Evaluation of case analysis presentation

Section 5: Teaching and Evaluation Plan

1. Schedule (Monday, 9.00 – 12.00 am.) (Room 3401)

Date	Time	Content	Teaching/ Learning	Faculty
Week 1 13 July	9.00-9.30	Course orientation	Discussion in class and online	Asst.Prof.Dr.Hathairat Dr. Ratjai
		1. Principle of pharmacology		
	9.30-12.30	1.1 Pharmacokinetics and Pharmacodynamics'	Discussion in class and online (Assignment 1)	Assoc.Prof.Dr.Benjamas
Week 2 20 July	8.00-10.00	1.2 Rational drug used	Discussion in class and online	Asst.Prof.Dr.Thitima
	10.00-12.00	1.3 Pharmacological of Herb	Discussion in class and online	Asst.Prof.Dr.Sukanya
Week 3 27 July		2. Update Concept of Pathophysiology		
	8.00-10.00	2.1 Cellular Biology: Cancer	Discussion in class and online (Assignment 2)	Assoc.Prof.Surasak, MD.
	10.00-12.00	1.4 Chemotherapy	Discussion in class and online	Assoc.Prof.Pattarapim, MD.

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Date	Time	Content	Teaching/ Learning	Faculty
Week 4 3 August	8.00-10.00	2.2 Infection: Incidence, emerging, pathophysiology, management	Discussion in class and online	Assoc.Prof.Saranyoo, MD.
	10.00-12.00	2.3 Cardiovascular disorders	Discussion in class and online	Asst.Prof.Dr.Charuwan
Week 5 10 August	8.00-10.00	2.4 Immunity disorders	Discussion in class and online (Assignment 3)	Assoc.Prof.Dr.Kittikorn Dr.Samonnann
	10.00-12.00	2.5 Respiratory disorders	Discussion in class and online	Dr.Samonnann
Week 6 17 August	9.00-10.30	Case-study	self-study	
Week 7 24 August	8.00-10.00	2.6 Endocrine and metabolism disorders	Discussion in class and online ((Assignment 4)	Dr. Ratjai
	10.00-12.00	2.7 Neurological disorders	Discussion in class and online	Asst.Prof.Dr. Luppana
Week 8 31 August	8.00-10.00	2.8 Gastrointestinal disorders	Discussion in class and online	Asst.Prof.Dr. Chantra
	10.00-12.00	2.9 Renal disorders	Discussion in class and online	Asst.Prof.Dr. Kataporn
Week 9 7 Sept	8.00-10.00	2.10 Shock	Discussion in class and online ((Assignment 5)	Asst.Prof.Dr.Hathairat
	10.00-12.00	Meet Advisor	Discussion with advisor	Asst.Prof.Dr.Hathairat Dr.Samonnann Dr. Ratjai Asst.Prof.Dr.Charuwan Assoc.Prof.Dr.Kittikorn Asst.Prof.Dr. Luppana

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Date	Time	Content	Teaching/ Learning	Faculty
				Asst.Prof.Dr. Chantra Asst.Prof.Dr. Kataporn
		3. Case-based learning		
Week 10 14 Sept	9.00-10.00	3.1 Case: Cancer	Presentation and Discussion	Dr.Samonnann
	10.00-11.00	3.2 Case: Emerging infection	Presentation and Discussion	Dr. Ratjai
Week 11 21 Sept	9.00-10.00	3.3 Case: ACS / MI	Presentation and Discussion	Asst.Prof.Dr.Charuwan
	10.00-11.00	3.4 Case: HIV/AIDS	Presentation and Discussion	Assoc.Prof.Dr.Kittikorn Dr.Samonnann
Week 12 28 Sept	9.00-10.30	Case-study	Self-study	
Week 13 5 Oct	9.00-10.00	3.5 Case: Respiratory Failure	Presentation and Discussion	Dr.Samonnann
	10.00-11.00	3.6 Case: Hyperglycemia / DKA	Presentation and Discussion	Dr. Ratjai
Week 14 12 Oct	9.00-10.00	3.7 Case: IICP	Presentation and Discussion	Asst.Prof.Dr. Luppana
	10.00-11.00	3.8 Case: Hepatic Failure	Presentation and Discussion	Asst.Prof.Dr. Chantra
Week 15 19 Oct	9.00-10.00	3.9 Case: Renal Failure	Presentation and Discussion	Asst.Prof.Dr. Kataporn
	10.00-11.00	3.10 Case: MODS	Presentation and Discussion	Asst.Prof.Dr.Hathairat
	11.00-11.30	Course evaluation	Discussion	Asst.Prof.Dr.Hathairat Assoc.Prof.Dr.Kittikorn

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2. Evaluation Plan of the Learning Outcomes

Learning Outcomes	Methods of Evaluation	Percentage
1.3, 2.1, 2.2, 3.1, 4.3, 4.4, 5.3	1. Active Participation in Class or Online (Individual)	10 %
	2. Assignments (Individual) 5 times	50 %
	2.1 Assignment 1	10 %
	2.2 Assignment 2	10 %
	2.3 Assignment 3	10 %
	2.4 Assignment 4	10 %
	2.5 Assignment 5	10 %
	3. Case analysis: mind mapping (group work)	15 %
	4. Case analysis presentation (group work)	15 %
	5. Case analysis report (group work)	10%

Section 6: Teaching Materials

1. Required Textbooks and materials

Capriotti, T. (2017). *Pathophysiology made incredibly visual!* (3rd ed.). Philadelphia: Wolters Kluwer.

Grossman, S. C. & Porth, C. M. (2014). *Porth's pathophysiology: Concepts of altered health states* (9th ed.). Philadelphia, PA: Wolters Kluwer.

Huether, S. E., McCance, K. L., Brashers, V. L., & Rote, N. S. (2017). *Understanding physiopathology* (6th ed.). St. Louis, MO: Saunders Elsevier.

Linton, A. D. (2016). *Introduction to Medical-Surgical Nursing* (6th ed.). St. Louis: Saunders Elsevier.

Nair, M. & Peate, I. (2015). *Pathophysiology for nurses at a glance*. West Sussex: John Wiley & Sons, Ltd.

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- Porth, C. (2015). *Essentials of pathophysiology: Concepts of altered health states* (4th ed.). Philadelphia, PA: Wolters Kluwer
- Story, L. (2015). *Pathophysiology: A practical approach* (2nd ed.). Burlington, MA: Jones & Barlett Learning.
- Willis, L. M. (2015). *Fluids & electrolytes made incredibly easy* (6th ed.). Philadelphia, PA: Wolters Kluwer

2. Data base / websites

- CINAHL Plus with FullText
- ProQuest Nursing & Allied Health

<http://web.ebscohost.com/ehost/search/basic?sid=f199f212-d8a2-4a61-90aea7d50a82ef80%40sessionmgr15&vid=1&hid=25>

<http://www.nur.psu.ac.th/nur/proquest.html>

<https://www.amsn.org/practice-resources/patient-care/joining-forces/pathophysiology>

<https://www.cdc.gov/diseasesconditions/>

http://www.heart.org/HEARTORG/Conditions/Conditions_UCM_001087_SubHomePage.jsp

<https://www.cancer.org/cancer.html>

<https://www.youtube.com/watch?v=mzfnxCEsck4>

https://www.youtube.com/watch?v=_x13XDNR39o

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