SCPA 502

Systemic Pathology

Semester 2/2017

Department of Pathobiology

Faculty of Science

Mahidol University

Course Syllabus

(Lecture-Lab-Self-study)

SCPA 502 Systemic Pathology 2(1-2-3)

Macroscopic and microscopic pathological alterations of various organs due to cell injury, inflammation, neoplasia, immunological deficiency, infection and other diseases.

Prerequisite None

Type of Course Required course

Session 2nd Semester

Course Conditions class size : None

Course Objectives

At the completion of the course, students should be able to:

1. Explain the pathological alterations of human body
2. Explain gross and histopathological changes of damages and diseases
3. Practice in pathological laboratory
4. Discuss and analyze the cases in systemic pathology

Course Outline

Weeks	Topic	Hour			Instructor
		Lecture/ Discussion	Lab.	Self-study	
1	Cardiovascular Pathology	1		2	WJ
	Lab 1: Cardiovascular Pathology		2	1	
2	Respiratory Pathology	2		4	WJ
	Lab 2-3: Respiratory Pathology		4	2	
3	Gastrointestinal Pathology	2		4	PS
	Lab 4-5: Gastrointestinal Pathology		4	2	
4	Liver, Pancreas and Gall Bladder Pathology	2		4	WP
	Lab 6-7: Liver, Pancreas, Gall Bladder		4	2	
5	Endocrine Pathology	1		2	ANJ
	Lab 8: Endocrine Pathology		2	1	
	Examination: Lecture	**L1-8**			Staff
	Examination: Laboratory	**Lab1-8**			
6	Skin Pathology	1		2	SN
	Lab 9: Skin Pathology		2	1	
7	Soft tissue and Bone-Joint Pathology	1		2	PC
	Lab 10: Soft tissue and Bone-Joint		2	1	
8	Female Reproductive Pathology	2		4	SN
	Lab 11-12: Female Reproductive Pathology		4	2	
9	Male Reproductive Pathology	1		2	NC
	Lab 13: Male Reproductive Pathology		2	1	
10	Renal Pathology	2		4	NK
	Lab 14-15: Renal Pathology		4	2	
	Examination: Lecture	**L9-15**			Staff
	Examination: Laboratory	**Lab9-15**			

Teaching methods

1. Lectures in class 15 hours.
2. Students design and carry out experiments in laboratory session 30 hours.

Teaching Media

1. Class handouts, Power point presentation
2. Gross specimens and Histopathology glass slides

Measurement and Evaluation of Students Achievement

1. Discussion, Participation, Presentation and Interactive performance 20 %
2. Written Examination in theory and laboratory twice during the course 80 %
3. Student Examination Grade = A, B+, B, C+, C, D+, D, F

Course Evaluation

1. Students gain knowledge according to the course objectives.
2. Students give written course evaluation at the end of the course.
3. Evaluate students' satisfaction towards teaching and learning of the course using a questionnaire.
4. The lecturer will be notified with the result of the course evaluation from students to further improve the lecturing process.

References

1. Kierszenbaum AL, Tres LL. Histology and Cell Biology: An Introduction to Pathology. 3rd., Elsevier, 2012, 701p.

2. Kumar V, Abbas AK, Aster JC. Robbins Basic Pathology. 9th ed., Saunders, 2013, 910p.

3. Rubin E, Reisner HM. Essentials of Rubin's Pathology. 6th ed., Lippincott Williams & Wilkins, 2013, 704p.

4. Underwood JCE, Cross SS. General and Systemic Pathology. 5th ed., Churchill Livingstone, 2009, 872p.

Instructors

1. ANJ = Assistant Professor Dr. Amornrat Naranuntarat Jensen
2. NC = Lect. Dr. Nisamenee Charoenchon
3. NK = Lect. Dr. Niwat Kangwanrangsan
4. PC = Lect. Dr. Pornthip Chaichompoo
5. PS = Assistant Professor Dr. Prasit Suwannalert
6. SN = Lect. Somphong Narkpinit
7. WJ = Associate Professor Dr. Wannee Jiraungkoorskul
8. WP = Lect. Dr. Witchuda Payuhakrit

Coordinator Lect. Somphong Narkpinit, M.D.
Department of Pathobiology, Faculty of Science,
Mahidol University
Tel. 02-201-5550, E-mail: somphong.nar@mahidol.ac.th

Lesson Plan

1. Topic	Cardiovascular Pathology
2. Name Lecturer Education Position Contact	Dr. Wannee Jiraungkoorskul Ph.D. (Biology) Associate Professor 02-201-5563, 5571, wannee.jir@.mahidol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Program Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	8 January 2018 Time 9.00-10.00 am. and 10.00-12.00 am.
6. Topic Objective	At the completion of this unit the student will be able to
1. Describe the anatomy and histology of heart and vessel 2. Describe the pathogenesis of common heart and vessel disease 3. Laboratory practice in gross and glass specimen of heart disease	
7. Topic Detail	
Anatomy and histology of heart and vessel, pathogenesis of common heart and vessel disease, practice in gross and glass specimen of heart disease	
8. Learning Methods	Lecture, Lab experiment, Self study, Group discussion
9. Teaching Media	Power point presentation, Handout, Text book, Glass slide, Gross specimen
10. Teaching Equipment	Computer, LCD, Microscope
11. Examination and Evaluation	Examination, Post test, Lab report
12. Date of Improvement	2 January 2018

Lesson Plan

1. Topic	Respiratory Pathology
2. Name Lecturer Education Position Contact	Dr. Wannee Jiraungkoorskul Ph.D. (Biology) Associate Professor 02-201-5563, 5571, wannee.jir@.mahidol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Program Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	10 January 2018 Time 9.00-11.00 am. and 12.00-4.00 pm.
6. Topic Objective	At the completion of this unit the student will be able to
1. Describe the anatomy and histology of respiratory system 2. Describe the pathogenesis of common lung disease 3. Laboratory practice in gross and glass specimen of lung disease	
7. Topic Detail	
Anatomy and histology of respiratory system, pathogenesis of common lung disease, practice in gross and glass specimen of lung disease	
8. Learning Methods	Lecture, Lab experiment, Self study, Group discussion
9. Teaching Media	Power point presentation, Handout, Text book, Glass slide, Gross specimen
10. Teaching Equipment	Computer, LCD, Microscope
11. Examination and Evaluation	Examination, Post test, Lab report
12. Date of Improvement	2 January 2018

Lesson Plan

1. Topic	Gastrointestinal Pathology
2. Name Lecturer Education Position Contact	Dr. Prasit Suwannalert Ph.D. (Pathobiology) Assistant Professor 02-201-5558, Email: prasit.suw@mahidol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Program Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	12 January 2018 Time 9.00-11.00 am. and 1.00-4.00 pm.
6. Topic Objective	At the completion of this unit the student will be able to
1. Describe pathological changes of esophagus, stomach, small intestine, large intestine, appendix, and peritoneum 2. Discuss the pathogenesis of gastrointestinal system	
7. Topic Detail	
1. Pathology of esophagus 2. Pathology of stomach 3. Pathology of small and large intestines 4. Pathology of appendix and peritoneum	
8. Learning Methods	Lecture, Laboratory, Discussion and Self study
9. Teaching Media	PPT, Handout, Text book, Gross specimens, Glass slides of histopathology
10. Teaching Equipment	Computer, LCD
11. Examination and Evaluation	Short answer questions
12. Date of Improvement	5 January 2018

Lesson Plan

1. Topic	Liver, Pancreas and Gall Bladder Pathology
2. Name Lecturer Education Position Contact	Witchuda Payuhakrit Ph.D. (Pathobiology) Lecturer 02-201-5572, Email: witchuda.pay@mahidol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Program Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	15 January 2018 Time 9.00-10.00 am. and 10.00-12.00 am.
6. Topic Objective	At the completion of this unit the student will be able to
1. Understand the etiology of liver, pancreas and gall bladder disease 2. Describe the pathogenesis of common disease in liver, pancreas and gall bladder 3. Describe the gross pathology of common disease in liver, pancreas and gall bladder 4. Describe the histopathology of common disease in liver, pancreas and gall bladder	
7. Topic Detail	
1. Introduction of normal liver, pancreas and gall bladder anatomy and function 2. Liver pathology 3. Pancreas pathology 4. The biliary tract pathology	
8. Learning Methods	Lecture, Presentation, Group discussion
9. Teaching Media	Power point presentation, Handout, Text books, Publications
10. Teaching Equipment	Computer, LCD
11. Examination and Evaluation	Written examination
12. Date of Improvement	6 January 2018

Lesson Plan

1. Topic	Endocrine Pathology
2. Name Lecturer Education Position Contact	Amornrat Naranuntarat Jensen Ph.D. (Toxicology) Assistant Professor 02-201-5579, amornrat.nar@mahidol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Program Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	17 January 2018 Time 9.00-11.00 am. and 12.00-4.00 pm.
6. Topic Objective	At the completion of this unit the student will be able to
1. Define the physiological actions of hormones secreted from different endocrine organs 2. Describe and able to give example of pathology associated with each endocrine organ 3. Explain the consequences of endocrine disorders from under-and over-production of hormones	
7. Topic Detail	
Physiological actions of hormones from major endocrine organs Endocrine diseases associated with the following organs - Pineal gland - Pituitary gland - Thyroid gland - Parathyroid glands - Adrenal glands - Pancreas	
8. Learning Methods	Lecture, Class discussion and Self-study
9. Teaching Media	Handout, Text book
10. Teaching Equipment	Computer, LCD
11. Examination and Evaluation	Short assay examination
12. Date of Improvement	4 January 2018

Lesson Plan

1. Topic	Skin Pathology
2. Name Lecturer Education Position Contact	Somphong Narkpinit M.D. Lecturer 02-201-5550, E-mail: somphong.nar@mahidol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Program Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	19 January 2018 Time 9.00-10.00 am. and 10.00-12.00 am.
6. Topic Objective	At the completion of this unit the student will be able to
1. Describe anatomy and histology of normal skin and pathological skin 2. Describe definition of macroscopic and microscopic lesion 3. Describe dermatopathology of common skin disease	
7. Topic Detail	
1. Normal anatomy and histology of skin 2. Definition of macroscopic lesion 3. Definition of microscopic lesion 4. Common skin disease 4.1 Infection of the skin disease 4.2 Inflammation the skin disease 4.3 Neoplasm of the skin 4.4 Pigmentary disorder of the skin 4.5 Disorder of epidermal maturation 4.6 Disorder of epidermal appendage	
8. Learning Methods	Lecture, Lab experiment, Self study, Group discussion
9. Teaching Media	Power point presentation, Handout, Text book, Glass slide, Gross specimen
10. Teaching Equipment	Computer, LCD, Microscope
11. Examination and Evaluation	Examination, Post test, Lab report
12. Date of Improvement	6 January 2018

Lesson Plan

1. Topic	Soft tissue and Bone-Joint Pathology (Lecture)
2. Name Lecturer Education Position Contact	Pornthip Chaichompoo Ph.D. (Immunology) Lecturer E-mail: pornthip.chh@mahidol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Program Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	29 January 2018 Time 9.00-10.00 am.
6. Topic Objective	At the completion of this unit the student will be able to
1. Describe anatomy and cellular structure of bone, joint and soft tissue. 2. Describe mechanism and function of bone, joint and soft tissue. 3. Diagnosis of clinicalpathology of bone, joint and soft tissue diseases.	
7. Topic Detail	
1. Anatomy and cellular structure of bone, joint and soft tissue. 2. Mechanismand function of bone, joint and soft tissue. 3. Clinical manifestation and pathophysiology of bone, joint and soft tissue diseases.	
8. Learning Methods	Lecture, Presentation, Group discussion
9. Teaching Media	Power point presentation, Handout, Text book
10. Teaching Equipment	Computer, LCD
11. Examination and Evaluation	Assay Examination
12. Date of Improvement	January 2018

Lesson Plan

1. Topic	Soft tissue and Bone-Joint Pathology (Laboratory)
2. Name Lecturer Education Position Contact	Pornthip Chaichompoo Ph.D. (Immunology) Lecturer Email: pornthip.chh@mahidol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Programme Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	29 January 2018 Time 10.00 am. -12.00 pm.
6. Topic Objective	At the completion of this unit the student will be able to
1. Analysis and diagnosis of histopathology of bone diseases including developmental abnormalities in bone cells, matrix and structure, fractures, osteonecrosis, infections and bone tumors. 2. Analysis and diagnosis of histopathology of joint diseases including arthritis and tumors. 3. Analysis and diagnosis of histopathology of soft tissue diseases including adipose tumors, fibrous tumors, muscle tumors and tumors of uncertain histogenesis.	
7. Topic Detail	
1. Clinical manifestation, pathology and diagnosis of bone diseases including developmental abnormalities in bone cells, matrix and structure, fractures, osteonecrosis, infections and bone tumors. 2. Clinical manifestation, pathology and diagnosis of joint diseases including arthritis and tumors. 3. Clinical manifestation, pathology and diagnosis of soft tissue diseases including adipose tumors, fibrous tumors, muscle tumors and tumors of uncertain histogenesis.	
8. Learning Methods	Lecture, Presentation, Group discussion
9. Teaching Media	Power point presentation, Handout, Text book
10. Teaching Equipment	Computer, LCD
11. Examination and Evaluation	Assay Examination
12. Date of Improvement	January 2018

Lesson Plan

1. Topic	Female reproductive pathology
2. Name Lecturer Education Position Contact	Somphong Narkpinit M.D. Lecturer E-mail: somphong.nar@mahidol.ac.th
3. Course	Systemic Pathology (SCBM 342)
4. Programme Title	B.Sc. (Biomedical Science)
5. Date and Time	31 January 2018 Time 9.00-12.00 am. and 12.00-4.00 pm.
6. Topic Objective	At the completion of this unit the student will be able to
1. Identify and understand the gross pathologic features and pathogenesis of the major female reproductive disease 2. Identify and understand the histopathologic features of the major female reproductive disease 3. Correlate between pathogenesis and clinical manifestration of female reproductive disease	
7. Topic Detail	
1.Gross pathologic features and pathogenesis of the major female reproductive disease 2. Histopathologic features of the major female reproductive disease 3.Clinical manifestration of female reproductive disease	
8. Learning Methods	Lecture, Lab experiment, Self study, Group discussion
9. Teaching Media	Power point presentation, Handout, Text book, Glass slide, Gross specimen
10. Teaching Equipment	Computer, LCD, Microscope
11. Examination and Evaluation	Assay Examination
12. Date of Improvement	January 2018

Lesson Plan

1. Topic	Male Reproductive Pathology
2. Name Lecturer Education Position Contact	Nisamanee Charoenchon Ph.D. (Medicine) Lecturer Email: nisamanee.cha@mahiol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Program Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	2 February 2018 Time 9.00-10.00 am. and 10.00 -12.00 am.
6. Topic Objective	At the completion of this unit the student will be able to
1. Define basic structure of male sex organs 2. Identify specific findings associated with diseases of the male sex organs 3. Characterize pathology of male sex organs	
7. Topic Detail	
1. Basic structure & function of male reproductive (sex organ) system 2. Pathologic features of major diseases of male sex organs 3. Clinical and laboratory finding of male reproductive diseases	
8. Learning Methods	Lecture
9. Teaching Media	Power Point Presentation, Handout
10. Teaching Equipment	Computer, Microscope
11. Examination and Evaluation	Assay Examination
12. Date of Improvement	January 2018

Lesson Plan

1. Topic	Renal Pathology
2. Name Lecturer Education Position Contact	Niwat Kangwanrangsan Ph.D. (Medical Sciences) Lecturer Email: niwat.kan@mahiol.ac.th
3. Course	Systemic Pathology (SCPA 502)
4. Programme Title	M.Sc. and Ph.D. in Pathobiology
5. Date and Time	5 February 2018 Time 9.00-12.00 am. and 12.00-4.00 pm.
6. Topic Objective	At the completion of this unit the student will be able to
1. Describe basic structure & function of kidney and urinary system 2. Identify histopathological and gross findings of renal diseases 3. Discuss pathological mechanism and associated syndrome 4. Correlate clinical features and laboratory investigation of renal disease	
7. Topic Detail	
1. Morphology & function of kidney and urinary system 2. Gross and histopathologic features of major renal diseases 3. Cause and mechanism of renal disorders 4. Characteristic features and laboratory investigation of renal diseases	
8. Learning Methods	Lecture
9. Teaching Media	Power Point Presentation, Handout
10. Teaching Equipment	Computer, Microscope
11. Examination and Evaluation	Assay Examination
12. Date of Improvement	January 2018