

Course Title	<b>Pathology II</b>				
Course Code	<b>MED-309</b>				
Course Type	Required				
Level	Undergraduate				
Year / Semester	Year 3/ Semester 6 (Spring)				
Teacher's Name	<b>Course Lead:</b> Dr Dimitrios Kanakis				
ECTS	6	Lectures / week	4	Laboratories / week	1
Course Purpose and Objectives	<p>The main objectives of the course are:</p> <ul style="list-style-type: none"> <li>• To deal systematically with the major disorders of gallbladder, biliary tract and exocrine pancreas.</li> <li>• To study the disorders associated with the various endocrine glands of the human body.</li> <li>• To describe the different renal and urinary system diseases.</li> <li>• To examine comprehensively the disorders of both the male and female reproductive systems, as well as the various mammary lesions.</li> <li>• To describe the several benign and neoplastic conditions of the skin and subcutaneous tissue.</li> <li>• To investigate the pathological processes of the central and peripheral nervous system.</li> <li>• To explore in depth the diverse disorders of the musculoskeletal system.</li> </ul>				
Learning Outcomes	<p>The following list provides the learning objectives that will be covered in the lectures, and tutorials of each week:</p> <p><b>Week 1</b></p> <p><b><i>Lobs covered during lectures:</i></b></p> <ol style="list-style-type: none"> <li>1. Describe the inflammatory and non-inflammatory diseases of the gallbladder and biliary tract.</li> <li>2. Describe the benign and malignant tumors of the gallbladder and biliary tract.</li> <li>3. Discuss the congenital, inflammatory and non-inflammatory disorders of exocrine pancreas.</li> <li>4. Describe pancreatic cancer.</li> <li>5. Describe the various types of diabetes mellitus and its related complications.</li> </ol>				

6. Describe the different endocrine pancreatic tumours.
7. Describe the various congenital anomalies of the thyroid gland, and the different types of goiter.
8. Describe hyper- and hypothyroidism.
9. Outline the various types of thyroiditis.
10. Describe the benign and malignant tumours of the thyroid gland.
11. Describe hyper-, hypo- and pseudo-hypoparathyroidism.
12. Describe the benign and malignant tumours of the parathyroid gland.

***Lobs covered during lab practical:***

13. Observe and describe inflammation of gallbladder.
14. Observe and describe malignant tumour of gallbladder.

**Week 2**

***Lobs covered during lectures:***

15. Describe the various adrenal endocrine syndromes.
16. Describe the various forms of adrenal insufficiency.
17. Describe the benign and malignant tumours of the adrenal gland (cortex & medulla).
18. Describe the different diseases of the pituitary/hypothalamus.
19. Explain the types of Multiple Endocrine Neoplasia (MEN) syndromes.

***Lobs covered during lab practical:***

20. Observe and describe struma nodosa of the thyroid gland.
21. Observe and describe carcinoma medullare of the thyroid gland.
22. Observe and describe adenoma of the adrenal gland.

**Week 3**

***Lobs covered during lectures:***

23. Describe the clinical manifestations of renal diseases.
24. Describe the mechanisms of glomerular injury and disease.
25. Describe the vascular disorders of the kidneys.
26. Discuss the various types of glomerular disorders.
27. Describe the different tubular interstitial diseases.
28. Describe the infectious disorders of the upper urinary tract.
29. Explain the metabolic and regulatory disorders of the kidneys.

***Lobs covered during lab practical:***

30. Observe and describe glomerular atrophy of kidney (cirrhosis).
31. Observe and describe chronic glomerulonephritis.
32. Observe and describe chronic pyelonephritis.
33. Observe and describe acute nephritis.

#### **Week 4**

##### ***Lobs covered during lectures:***

34. Describe the congenital disorders of the kidneys.
35. Describe the cystic diseases of the kidneys.
36. Explain urinary outflow obstruction (i.e. renal stones-uroolithiasis, uronephrosis).
37. Describe the benign and malignant neoplasms of the kidneys.
38. Describe the infectious disorders of the lower urinary tract.
39. Describe the immunologic and inflammatory disorders of the lower urinary tract.
40. Describe the benign and malignant neoplasms of the lower urinary tract.
41. Describe the sexually transmitted diseases.

##### ***Lobs covered during lab practical:***

42. Observe and describe septic embolic nephritis.
43. Observe and describe hypernephroma of the kidney
44. Observe and describe papilloma of the urinary bladder.

#### **Week 5**

##### ***Lobs covered during lectures:***

45. Describe the congenital disorders of the male reproductive system (penis, scrotum -testis).
46. Outline the infectious and inflammatory disorders of the various organs of the male reproductive system (penis, testis-epididymis, prostate).
47. Describe the traumatic and mechanical disorders of testis (i.e. hydrocele, haematocele, chylocele, elephantiasis).
48. Explain the penile and testicular neoplasms.
49. Define benign prostatic hyperplasia.
50. Describe Prostatic Intraepithelial Neoplasia (PIN); low and high grade.
51. Describe prostate cancer.
52. Explain Gleason Grading System of prostate cancer.

##### ***Lobs covered during lab practical:***

53. Observe and describe atrophy of the testis.
54. Observe and describe seminoma of the testis.
55. Observe and describe hypertrophy of the prostate.
56. Observe and describe carcinoma of the prostate.

### **Week 6**

#### ***Lobs covered during lectures:***

57. Describe the congenital disorders of the breast.
58. Describe the infectious, immunologic and inflammatory disorders of the breast.
59. Describe the benign and undefined neoplasms of the breast.
60. Describe DCIS and LCIS.
61. Describe the malignant neoplasms of the breast.
62. Explain the tumour grading of breast cancer.
63. Describe the congenital disorders of the female reproductive system.

#### ***Lobs covered during lab practical:***

64. Observe and describe fibrocystic disease of the breast.
65. Observe and describe fibroadenoma of the breast.
66. Observe and describe scirrhous carcinoma of the breast.

### **Week 7**

#### **Online Formative Midterm Exam**

#### ***Lobs covered during lectures:***

67. Describe the infectious, immunologic and inflammatory disorders of the different organs and structures of the female reproductive system (i.e. vulva, vagina, cervix, uterus, salpinx, ovary).
68. Describe the benign neoplasms and cysts of the different organs and structures of the female reproductive system (i.e. vulva, vagina, cervix, uterus, salpinx, ovary).
69. Describe the precancerous and malignant lesions of the different organs and structures of the female reproductive system (i.e. vulva, vagina, cervix, uterus, salpinx, ovary).
70. Describe the group of pathological diseases/conditions associated with pregnancy.

#### ***Lobs covered during lab practical:***

71. Observe and describe carcinoma cervicis uteri.
72. Observe and describe myoma of the uterus.
73. Observe and describe sarcoma of the uterus.

74. Observe and describe endometriosis (in the ovary).
75. Observe and describe ovarian cyst.
76. Observe and describe teratoma of the ovary.
77. Observe and describe adenocarcinoma of the ovary.

### **Week 8**

#### ***Lobs covered during lectures:***

78. Describe the congenital disorders of the skin and subcutaneous tissue.
79. Describe the infectious disorders of the skin and subcutaneous tissue.
80. Explain the immunologic and inflammatory disorders of the skin and subcutaneous tissue.
81. Describe the benign neoplasms, cysts and other skin lesions.
82. Discuss the malignant neoplasms of the skin and subcutaneous tissue.

#### ***Lobs covered during lab practical:***

83. Observe and describe sebaceous cyst.
84. Observe and describe fibroma of the skin.
85. Observe and describe congenital giant cell nevus of the skin.
86. Observe and describe melanoma of the skin.
87. Observe and describe basaloma of the skin.
88. Observe and describe squamous cell carcinoma of the skin.

### **Week 9**

#### ***Lobs covered during lectures:***

89. Describe oedema, herniation and hydrocephalus.
90. Describe the traumatic and mechanical disorders of the nervous system.
91. Describe the various cerebrovascular diseases.
92. Explain the congenital malformations of the nervous system.

### **Week 10**

#### ***Lobs covered during lectures:***

93. Describe the infectious, immunologic and inflammatory disorders of nervous system.
94. Explain the most important prion diseases.
95. Describe the different primary diseases of myelin.
96. Describe the acquired metabolic and toxic disturbances of the nervous system.

	<p>97. Describe the various neurodegenerative diseases.</p> <p><b>Lobs covered during lab practical:</b></p> <p>98. Observe and describe meningitis.</p> <p><b>Week 11</b></p> <p><b>Lobs covered during lectures:</b></p> <p>99. Describe the benign and malignant neoplasms of the central nervous system.</p> <p>100. Describe the main disorders of the peripheral nerves.</p> <p>101. Describe the disorders of the neuromuscular junction.</p> <p>102. Outline the different types of peripheral nerve sheath tumours.</p> <p>103. Describe the most important ocular disorders.</p> <p><b>Lobs covered during lab practical:</b></p> <p>104. Observe and describe diffuse astrocytoma.</p> <p>105. Observe and describe glioma cerebri (GBM).</p> <p>106. Observe and describe neurilemmoma.</p> <p>107. Observe and describe malignant schwannoma.</p> <p><b>Week 12</b></p> <p><b>Lobs covered during lectures:</b></p> <p>108. Describe the congenital disorders of the musculoskeletal system.</p> <p>109. Describe the infectious disorders of the musculoskeletal system.</p> <p>110. Discuss the immunologic and inflammatory disorders of the musculoskeletal system.</p> <p>111. Describe the degenerative and metabolic disorders of the musculoskeletal system.</p> <p>112. Describe the benign neoplasms of the musculoskeletal system.</p> <p>113. Describe the malignant neoplasms of the musculoskeletal system.</p> <p><b>Lobs covered during lab practical:</b></p> <p>114. Observe and describe gout.</p> <p>115. Observe and describe lipoma.</p> <p>116. Observe and describe chondroma of the pubic bone.</p> <p>117. Observe and describe osteogenic sarcoma of the bone.</p>		
	Prerequisites	MED-304 Pathology I	Required

Course Content	<ul style="list-style-type: none"> <li>• <b>Gallbladder, Biliary Tract and Exocrine Pancreas</b></li> <li>• <b>Endocrine System</b> (Diseases of the endocrine pancreas, thyroid and parathyroid gland, adrenal gland and pituitary/hypothalamus, MEN)</li> <li>• <b>Renal and Urinary System</b></li> <li>• <b>Male Reproductive System</b></li> <li>• <b>Female Reproductive System and Breast</b></li> <li>• <b>Skin and Subcutaneous Tissue</b></li> <li>• <b>Neuropathology and Sensory Organs</b></li> <li>• <b>Musculoskeletal System</b></li> </ul>																																										
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Bibliography	<p><b>Required Textbooks/Reading:</b></p> <table border="1"> <thead> <tr> <th>Authors</th> <th>Title</th> <th>Edition</th> <th>Publisher</th> <th>Year</th> <th>ISBN</th> </tr> </thead> <tbody> <tr> <td>Vinay Kumar, Abul K. Abbas, Jon C. Aster</td> <td>Robbins Basic Pathology</td> <td>10th Edition</td> <td>Elsevier</td> <td>2017</td> <td>9780323353175</td> </tr> </tbody> </table> <p><b>Recommended Textbooks/Reading:</b></p> <table border="1"> <thead> <tr> <th>Authors</th> <th>Title</th> <th>Edition</th> <th>Publisher</th> <th>Year</th> <th>ISBN</th> </tr> </thead> <tbody> <tr> <td>Vilnay Kumar, Abul K. Abbas, Jon C. Aster</td> <td>Pathologic Basis of Disease</td> <td>9<sup>th</sup> Edition</td> <td>Elsevier</td> <td>2015</td> <td>978-1455726134</td> </tr> <tr> <td>Kaplan</td> <td>USMLE Step 1 Lecture Notes 2017: Pathology</td> <td>1<sup>st</sup> Edition</td> <td>Kaplan Medical</td> <td>2017</td> <td>9781506208381</td> </tr> <tr> <td>Arthur S. Schneider and Philip A. Szanto</td> <td>BRS Pathology</td> <td>5th Edition</td> <td>Lippincott Williams &amp; Wilkins</td> <td>2014</td> <td>9781451188899</td> </tr> <tr> <td>Edward F Goljan</td> <td>Rapid Review Pathology</td> <td>5<sup>th</sup> Edition</td> <td>Elsevier (Saunders)</td> <td>2019</td> <td>9780323476683</td> </tr> </tbody> </table>	Authors	Title	Edition	Publisher	Year	ISBN	Vinay Kumar, Abul K. Abbas, Jon C. Aster	Robbins Basic Pathology	10th Edition	Elsevier	2017	9780323353175	Authors	Title	Edition	Publisher	Year	ISBN	Vilnay Kumar, Abul K. Abbas, Jon C. Aster	Pathologic Basis of Disease	9 <sup>th</sup> Edition	Elsevier	2015	978-1455726134	Kaplan	USMLE Step 1 Lecture Notes 2017: Pathology	1 <sup>st</sup> Edition	Kaplan Medical	2017	9781506208381	Arthur S. Schneider and Philip A. Szanto	BRS Pathology	5th Edition	Lippincott Williams & Wilkins	2014	9781451188899	Edward F Goljan	Rapid Review Pathology	5 <sup>th</sup> Edition	Elsevier (Saunders)	2019	9780323476683
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	Walter L. Kemp, Dennis K. Burns, Travis G. Brown	Pathology: The Big Picture	1st Edition	McGraw-Hill (LANGE)	2007	978-0071477482
	Hussain A. Sattar	Fundamentals of Pathology: Medical Course and Step 1 Review	2018 Edition	Pathoma LLC	2018	9780983224631
Assessment	On-line Formative Midterm Exam and Summative Final Exam. The Summative Final Exam will contribute towards 100% of the course grade. Assessment is by Single Best Answer MCQs (SBAs) and there may also be some Short Answer Questions (SAQs).					
Language	English					