

**UCDSOM GENERAL COMPETENCIES AND EDUCATIONAL PROGRAM
OBJECTIVES LINKED TO COURSE OBJECTIVES COMPETENCIES FOR
PMD410A GENERAL PATHOLOGY**

GRADUATION COMPETENCY 1. UCDSOM graduates will provide **patient care** that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

EDUCATIONAL OBJECTIVES RELEVANT TO COURSE OBJECTIVES	COURSE OBJECTIVES 1	ASSESSMENT OF STUDENT ACHIEVEMENT OF COURSE OBJECTIVES
<p>I. 2. Organize, synthesize, and interpret information obtained from patient records, history and physical examination to construct a rational differential diagnosis and devise a cost-effective, evidence-based plan for management of the patient.</p> <p>I. 6. Employ a systematic approach to clinical reasoning and problem-solving that begins with problem recognition, ends with case resolution, and explicitly acknowledge the degree of uncertainty at each step.</p> <p>I. 8. Retrieve patient information from and document patient information in electronic and paper-based clinical information systems while safeguarding patient confidentiality.</p>	<p>1. Prepare for patient care in third year clerkship using case scenarios of inflammation, cell death, vascular disease and neoplasia.</p> <p>2. Learn the medical value of an autopsy examination.</p>	<p>Multiple choice questions with links to images and virtual microscopic images in quizzes and final examinations based on cases discussed in class</p> <p>Student assessment of how well the course met the stated Objectives</p> <p>Student self-assessment of knowledge in each competency at the end of course</p>

GRADUATION COMPETENCY II. UCDSOM graduates will demonstrate **knowledge** about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.

EDUCATIONAL OBJECTIVES RELEVANT TO COURSE OBJECTIVE	COURSE OBJECTIVE	ASSESSMENT OF STUDENT ACHIEVEMENT OF COURSE OBJECTIVE
<p>II. 1. Understand the normal human structure and function relevant to the understanding of human disease.</p> <p>II. 2. Describe the etiology, pathogenesis, structural and functional manifestations of representative diseases for all organ systems of the human body.</p>	<p>3. Acquire the fundamental pathology knowledge required for a generalist physician. See specific course objectives</p>	<p>Multiple choice questions with links to images and virtual microscopic images in quizzes and final examinations based on cases discussed in class</p> <p>Student assessment of how well the course met the stated Objectives</p> <p>Student self-assessment of knowledge in each competency at the end of course</p>

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GRADUATION COMPETENCY III. UCDSOM graduates will exhibit **interpersonal and communication** skills that result in effective information exchange and teaming with patients, their patients' families, and professional associates.

EDUCATIONAL OBJECTIVES RELEVANT TO COURSE OBJECTIVES	COURSE OBJECTIVE 4	ASSESSMENT OF STUDENT ACHIEVEMENT OF COURSE OBJECTIVES
<p>III. 2. Establish and maintain effective, collaborative professional relationships with peers, colleagues, and allied health care professionals.</p> <p>III. 3. Provide constructive feedback to colleagues, and use feedback from multiple sources to improve professional skills.</p>	<p>4. Learn how to effectively communicate basic facts, concepts and the clinical reasoning process to peers and teachers.</p>	<p>Not formally assessed unless poor communication skills surface in laboratory/discussion sessions</p>

GRADUATION COMPETENCY IV. UCDSOM graduates will demonstrate a commitment to **professionalism** in carrying out their responsibilities with adherence to ethical principles, and sensitivity to a diverse patient population.

EDUCATIONAL OBJECTIVES RELEVANT TO COURSE OBJECTIVES	COURSE OBJECTIVES	ASSESSMENT OF STUDENT ACHIEVEMENT OF COURSE OBJECTIVES
None	None	Not assessed in the course.

GRADUATION COMPETENCY V. UCDSOM graduates will demonstrate knowledge of **system-based practice**, i.e., responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

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None	None	Not assessed in the course

GRADUATION COMPETENCY VI. UCDSOM graduates will acquire **life-long learning skills**.

EDUCATIONAL OBJECTIVES RELEVANT TO COURSE OBJECTIVE	COURSE OBJECTIVE 5	ASSESSMENT OF STUDENT ACHIEVEMENT OF COURSE OBJECTIVE
<p>VI. 1. Demonstrate an inquisitive nature, information management skills, and critical evaluation framework necessary to sustain life-long learning.</p>	<p>5. Utilize the vast array of self-study materials in the syllabus and online for the development of life-long learning skills.</p>	<p>Not assessed in the course</p>

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GRADUATION COMPETENCY VII. UCDSOM graduates will learn how to approach **practice-based learning**.

EDUCATIONAL OBJECTIVES RELEVANT TO COURSE OBJECTIVES	COURSE OBJECTIVES	ASSESSMENT OF STUDENT ACHIEVEMENT OF COURSE OBJECTIVES
None	None	Not assessed in the course

SPECIFIC COURSE OBJECTIVES

CELL INJURY AND CELL DEATH

LEARNING OBJECTIVES:

1. Describe the sequential events in hypoxic or anoxic cell injury
2. Describe the histologic morphology of anoxic (accidental) cell death.
3. Contrast the morphologic differences between reversible and irreversible cell injury.
4. Explain the mechanisms of free radical induced cell injury.
5. Describe the sequential events in apoptotic cell death.
6. Describe the histologic morphology of apoptotic cell death.
7. Compare and contrast the stimuli, morphology, and tissue reactions in apoptosis and necrosis.
8. Describe the gross and histologic morphology of hepatic lipid accumulation.
9. Describe the histologic characteristics of cellular accumulations of carbon, lipofuscin and hemosiderin.

INFLAMMATION

LEARNING OBJECTIVES:

1. Describe the cardinal signs and symptoms of acute inflammation.
2. Describe the sequence of vascular events of acute inflammation
3. Describe the sequential neutrophilic response to acute inflammation
4. Compare and contrast the histologic features of acute and chronic inflammation.
5. Describe the role of at least two cytokines in inflammation.
6. Describe at least two harmful effects of inflammation.
7. Describe the histologic morphology of granulomatous inflammation.
8. Describe the events of wound healing in proper sequence.

VASCULAR PATHOLOGY

LEARNING OBJECTIVES:

1. Define edema and describe the causes
2. Contrast active with passive congestion
3. Define hemorrhage and describe the causes
4. Define hypo and hypercoagulopathy
5. Define thrombosis and describe the causes

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6. Define shock and list the causes
7. Describe the elements of normal hemostasis
8. Describe and identify the gross and microscopic features of: atherosclerotic plaque, pre-mortem thrombus, post-mortem thrombus

NEOPLASIA

LEARNING OBJECTIVES:

1. Compare and describe the gross and histologic morphology of hyperplasia, hypertrophy, atrophy and metaplasia.
2. Describe the general behavior of the following neoplastic processes: benign neoplasia, borderline tumor, premalignant (precancerous) lesion, in-situ carcinoma, malignant neoplasia, invasion, metastasis
3. Given gross photographs, photomicrographs or verbal descriptions, identify the architectural and cytologic markers of malignancy, including common patterns of invasion and metastasis.
4. Define pathologic grade and pathologic stage of tumor. Identify patterns of low, intermediate and high grade histopathology.
5. Describe three common modes of tumor metastasis and give examples of a specific tumor for each pathway of spread.
6. Describe the general model of tumor cell growth including the concepts of growth fraction, and tumor doubling time.
7. Describe the sequence of events in the metastatic cascade model as illustrated in Robbins p. 303.

GROSS PATHOLOGY

LEARNING OBJECTIVES

1. Compare the normal organs with counterpart diseased organs in terms of
 - a. Size and weight
 - b. Color
 - c. Configuration of natural surfaces
 - d. Configuration of cut surfaces
 - e. Consistency
 - f. Smell
 - g. Dilatation
2. Study ICIARC
 - a. Identify the organ
 - b. Classify the lesion (focal or diffuse)
 - c. Identify key features
 - d. Aggregate findings
 - e. Record findings
 - f. Confirm with light microscopic examination

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3. Understand the concept of
 - a. Unifocal lesion
 - b. Multifocal lesion
 - c. Diffuse lesion
4. Enumerate the disease entities that constitute focal and diffuse lesions.

AUTOPSY PATHOLOGY

LEARNING OBJECTIVES

1. Describe at least five benefits that an autopsy can provide to clinicians, families and society.
2. Describe at least five indications for performance of an autopsy.
3. Describe the basic function of a Coroner's or Medical Examiner's Office.
4. Describe at least three situations which require reporting a death to the Coroner.
5. Describe an appropriate approach to obtaining consent for an autopsy.
6. The student will interpret "redacted" autopsy reports and list the key events in the disease course that led to the patient's demise.
7. The student will interpret gross and microscopic images from the autopsies and correlate these findings with the clinical symptoms.
8. The student will complete the death certificates which list the immediate, proximate and contributing causes of death.