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| Course Objectives — Disease & Therapeutics III MDC753 (Spring 2019) |
| Institutional Competency | **Course Objective** |
| 1. Interpersonal and Communication Skills (IC)
 | 1. Participate in class-discussions during case presentations and large group discussions (IC1A3).
2. Participate in Team-based Learning exercises and give and receive **peer-feedback** (IC2B1, IC1B1).
3. Present team findings during application exercise of **at least one TBL** (IC3A2).
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| 1. Medical Knowledge (MK)
 | 1. Disease processes addressed, include, but are not limited to:
	1. Cardiovascular: vasculitis, aneurysms, atherosclerosis, ischemic heart disease, dyslipidemias, autonomic disorders, cardiac arrhythmias, rheumatic fever, endocarditis, cardiac infections, malignancies of the heart, hypertension, cardiomyopathies, pericardial diseases, shock, heart failure, and valvular heart disease
	2. Renal: renal vascular disorders, glomerular diseases, electrolyte imbalances, interstitial and renal-tubular diseases, obstructive renal disorders, renal carcinomas, ESRD, AKI, and diabetic nephropathy,
	3. Respiratory: cystic fibrosis, pulmonary tuberculosis, respiratory distress of the newborn, respiratory viral and fungal infections, occupational lung diseases, pneumonia, adult pulmonary neoplasia, obstructive and restrictive lung disease, respiratory failure, ARDS, disorders of acid base imbalance, and obstructive sleep apnea
2. Describe the normal functioning of the cardiovascular, respiratory and renal system; specifically, as it pertains to the disease processes affecting these systems (MK2A1).
3. Discuss the causes and pathophysiological mechanisms of common diseases of the cardiovascular, respiratory and renal system (MK2B1); Including, but not limited to,
4. Discuss common presentations of the diseases of the cardiovascular, respiratory, and renal systems (MK2B1). E.g. differential of acute chest pain.
5. Describe the pathophysiological basis of clinical manifestations of common diseases of the cardiovascular, respiratory and renal system (MK2C1. MK3B1). E.g. fluid retention and edema in heart failure.
6. Use knowledge of pathology and pathophysiology to develop diagnostic and therapeutic plans for patients with common conditions of the cardiovascular, respiratory and renal system (MK3C1). E.g. management of pneumonia.
7. Apply the concepts of sensitivity, specificity, positive and negative predictive values, and likelihood ratios to decisions regarding patient testing for common diseases of the cardiovascular, respiratory and renal system (MK2D1).
8. Apply the foundational concepts of laboratory and radiologic diagnostic methodologies in the management of common disease of the cardiovascular, respiratory and renal system (MK3D2). E.g. chest x-ray in chronic lung diseases.
9. Describe the determinants of health and disease, and provide specific examples of how these determinants influence health outcomes in common diseases of the cardiovascular, respiratory and renal systems (MK2E1). E.g. role of dietary and environmental factors in the development of atherosclerosis.
10. Recognize the contributions of societal problems, including nicotine addiction, obesity, and poverty in the development of common disorders of the cardiovascular, respiratory and renal systems (MK2G1).
11. Discuss the mechanism of action, common adverse effects, efficacy and potency, drug interactions and cost of commonly prescribed pharmaceuticals in the management of cardiovascular, respiratory and renal system (MK2H2, PC2F2). E.g. discuss class-prototype for bronchodilator drugs.
12. Select appropriate medication for management of common diseases of the cardiovascular, respiratory and renal systems (MK3H1). E.g. discuss drug-therapy for management of unstable angina.
13. Discuss non-pharmaceuticals management, if applicable, for common disorders of the cardiovascular, respiratory, and renal system (MK2H3). E.g. discuss the role of dialysis in the management of ESRD.
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| 1. Practice-Based Learning and Improvement (PB)
 | 1. Critically assess and apply foundational, biomedical information in addressing treatment questions for ***selected*** diseases of the cardiovascular, respiratory and renal systems (PB2A1). This will be accomplished in the self-directed learning exercise and in the application exercises of each TBL.
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| 1. Patient Care (PC)
 | 1. Discuss techniques and basic science foundations of mechanical ventilation (PC2C1).
2. Discuss techniques and basic science foundations of dialysis for ESRD (PC2C1).
3. Explain the rationale, expected results, cost, risks, scientific basis and complications of diagnostic tests and therapeutic strategies commonly used in the management of diseases of the cardiovascular, respiratory and renal systems (PC2D1, PC2D2). E.g. ECG in the management of dysrhythmias.
4. Choose appropriate tests and management strategies based on effectiveness, risk, cost, and patient goals and values for ***selected*** conditions of the cardiovascular, respiratory, and renal systems (PC3D1). E.g. V/Q scan in the management of PE.
5. Recognize the role of elective medications in the management of ***selected*** conditions of the cardiovascular, respiratory, and renal systems (PC3D3).
6. Generate a broad differential diagnosis based on pathological mechanisms and disease prevalence, and identify the most likely diagnoses on that list for common diseases of the cardiovascular, respiratory and renal system (PC2E1). E.g. discuss the differential of acute chest pain.
7. Develop a basic diagnostic and therapeutic plan for common disease of the cardiovascular, respiratory and renal system (PC2E2). E.g. discuss the diagnosis and management of chronic respiratory acidosis.
8. Apply principles of clinical epidemiology to select and evaluate prevention strategies for common clinical problems of the cardiovascular, respiratory and renal system (PC2G1). E.g. TLC for prevention of dyslipidemias.
9. Discuss the etiology, presentation, and management of common life-threatening conditions of the cardiovascular, respiratory and renal systems (PC2H1). E.g. discuss approach to and management of patient suspected with ARDS.
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| 1. Professionalism (PR)
 | 1. Students are expected to demonstrate honesty and integrity in all professional settings, including but not limited to classroom participation, team and group sessions, simulations, and all assessments (PR2A1). Behavior not meeting aforementioned criteria will lead to citation(s) for professionalism violation.
2. At the end of each TBL, students are expected to complete peer-feedback and completion of this is a course requirements (PR2F1).
3. Each student will be held to Institutional Professionalism Standards (attached in the syllabus) and any grievous violation may lead citation(s) for professionalism violations (PR1F1, PR1F2).
4. Students are expected to complete faculty and course evaluations as a part of their professional responsibilities (PR2F1).
5. Participate in the SDL exercise—complete the self-study assignment and share with peers. Grade the assignment completed by your peers and write two formative questions on the selected topic (PR2J2).
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