Course number: PHA504
Course title: Introduction to Clinical Medicine
Number of credits: 2 credit hours
Day/time: Thursdays 3:00-4:50 with additional sessions per Google Calendar
Prerequisites: Entry into Carroll University PA program
Faculty: Robert Schellinger, MD
Office Hours: By appointment
Telephone: 262-370-0351
Email: rschelli@carrollu.edu

Course description
This course is an introduction to clinical medicine with focus on preventive medicine, screening guidelines and treatment protocols throughout the lifecycle. Emphasis is on disease prevention with attention given to the unique needs of diverse and underserved patient populations. Clinical genetics and immunogenetics are introduced linking current research to practical clinical medicine in advancing the understanding of the molecular basis of genetic concepts to practical clinical application. Introduction to oncology, its clinical presentation, diagnostics and therapeutics, as well as the role of preventive medicine in cancer is addressed, incorporating basic knowledge of gene expression and genetic patterns.

Topics covered in this course include:
Genetics
Population health & prevention
Health Literacy
Promoting Behavioral Change
Smoking Cessation
Screening for Disease
Nutrition Issues
Obesity and obesity prevention
Stress Reduction
Principles of Immunology

Course Content

It is understood that this is a graduate, professional course. As such, learning the material is the responsibility of the student. There is not enough face to face time in the classroom to cover all the material necessary in all aspects of adult medicine. For that reason, reading will include topics that are not specifically covered in lecture material. Lecture material will emphasize information that is imperative for the student to know before beginning the clinical year. The examinations will emphasize this same information, but you may expect that some material not covered in lecture, but covered in reading assignments, may appear on the exam as well, although to a lesser extent.

Discussion sessions reviewing patient cases are held in class covering those most important content areas. In order for you to reap the benefit of the discussion, it is imperative that you read the designated assignments BEFORE the discussion session.

Additionally: occasionally due to conflicts in lecturer’s schedules, lectures may need to be rescheduled at short notice. If a lecturer is unable to appear, there will still be a class during the allotted time period where similar information will be covered in an informal discussion.

Student Expectations

- demonstrates a positive attitude toward learning
- is on time for all scheduled classes, including timely return from breaks
- completes readings and assignments prior to class
- asks relevant and understandable questions
- takes full responsibility for learning and self-directed learning activities
- shows respect for self, other students, and faculty
- refrains from revealing negative feelings through tone of voice or body language
- refrains from disruptive activities during class including eating, talking, getting up and down, use of cell phone, etc.
- relies on personal resources before approaching others for help
- demonstrates cooperation with and mutual respect for peers
- responds to faculty, staff and peers readily and appropriately

Instructor Expectations

- demonstrates a positive attitude towards the facilitation of learning
- is on time for all scheduled classes
- should the need arise, reschedules class time with appropriate and timely notification to students, faculty, and staff
- provides appropriate course materials for class preparation prior to class
- is available for office hours or appointments to assist with questions; responds to faculty, staff, and students readily and appropriately
- listens attentively and initiates communication which is appropriate and timely
- identifies limitations in knowledge and provides appropriate resources for student learning
- provides timely and constructive feedback for assignments and assessments
• shows respect for self, students, and other faculty
• refrains from revealing negative feelings through tone of voice or body language
• demonstrates cooperation with and mutual respect for students, faculty, and staff

Required Text and Reading

None
Readings will be directed by the professors for individual lectures

Grading

The course grade for the fall semester will be based upon the following:

There will be two examinations each worth 50 points in addition to 50 points determined by class participation in case studies

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<td>D</td>
<td>69.99-60</td>
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<td>F</td>
<td>59 and below</td>
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Attendance and Professionalism

Attendance at all class periods, laboratories, and practical experiences are mandatory unless otherwise indicated. Poor attendance (unexcused absences, tardiness, and unauthorized early departures), lack of preparation, and unprofessional behavior may result in a lower or failing grade and/or be reported to the program progression committee. If you will be absent, tardy, or need to be excused early you must notify the course director via e-mail or phone prior to the scheduled meeting time. Tardiness and unauthorized early departures will be considered unexcused absences unless prior notification is submitted. Unexcused absences of more than 10% of class time may result in a failing grade. Absences are excused only at the discretion of the course director and/or the PA Program Director. Students may be required to make up missed laboratory time (excused or unexcused) at the discretion of the course director.

Examinations

There will be 2 exams during the semester. Please refer to the schedule for details. Exams are case-vignette multiple choice exams and are closed-book. Challenges to examination questions will be accepted for 1 week after the return of scores. Challenges must be submitted in writing via email with two written sources, at least one from recommended course readings.

No books, papers, notebooks, cellphones, smartphones, I-pods, I–pads, blackberry, etc. or backpacks/bookbags will be allowed on/near your desk during an examination. Recommend keeping personal belongings in the back of the room or in lockers. Hats are prohibited during an exam. Cellphones, smartphones, I-pods, I–pads, blackberry, etc must be turned off during an examination.

Assignments

Assignments will be required and will be outlined on the LMS course site.
Statement on Academic Integrity

The Carroll University Academic Integrity Policy is located in the Carroll University Student Handbook. Students are encouraged to familiarize themselves with it. If a student violates this policy in any way, the instructor(s) reserve the right to impose a sanction of failure on the assignment/assessment or failure in the course. If you have questions about appropriate citations, please ask your instructor.

Accommodation for Disabilities

Any requests for accommodation for physical or cognitive disability must be made through the Walter Young Disability Services Coordinator at Carroll University. Appropriate accommodations will be evaluated based on the program technical standards once notification has been received from the Walter Young coordinator. If an individual student has special needs or concerns about course requirements related to religious beliefs, cultural issues, or other issues, the student must contact the Program Director with a request for accommodation.

Modifications to the syllabus

The instructor and the University reserves the rights to modify, amend, or change the syllabus (schedule, course requirements, grading policy, etc.) as the curriculum and/or program require(s).

Remediation

Students who receive a D or an F in this or any physician assistant year 1 course will be placed on academic probation.

During the course, a student who scores more than 2 SD below the mean on an exam/assessment may be required to complete additional work. The student will be contacted by the course instructor and asked to meet to discuss the remediation requirements for that particular assessment. Remediation requirements will be determined by the course instructor. When an instructor requires remediation of a student it does not affect the exam/assessment grade, nor does it improve the semester or course grade. Remediation is required to ensure that course objectives are met. It is expected that assigned work for the purpose of remediation be completed in a thorough, professional and timely manner. Satisfactory completion of remediated work will be determined by the course instructor. Students may be required to complete additional work if the original remediation is deemed unsatisfactory.

Students should make every effort to resolve remediation issues with the course director. If a student is unable to resolve such issues s/he may request a review by the Didactic Subcommittee. All decisions made by the subcommittee are final. If remediation is not successfully completed by the end of the course/semester a grade of “Incomplete” will be given until the work is successfully completed. Please note that an incomplete course grade may delay program progression and/or graduation. Information regarding incomplete grades is available in the Graduate Catalog.

Course Goals

By the end of Introduction to Clinical Medicine, the student will have developed a broad primary care understanding of various lifestyle components and interventions which contribute to the health of individuals and patient populations including those who are medically underserved.

Learning Outcomes
By the end of Introduction to Clinical Medicine, the student will be able utilize knowledge of diagnostic and screening tests, genetics and epidemiologic data to evaluate clinical scenarios to impact patient health. The student will also be able to utilize behavior change concepts to develop nutritional and exercise prescriptions for patients to improve overall health and manage tobacco abuse, obesity and stress reactions.

**Learning Objectives**

**A. Genetics**

At the completion of this part of the course, the student will be able to:

1. Review the basic Mendelian inheritance patterns (autosomal dominant, autosomal recessive, X-linked dominant, X-linked recessive) and apply knowledge to predict genotypes and phenotypes in various clinical scenarios.

2. Compare multifactorial and single gene inheritance patterns with examples of related disease processes.

3. Critique misconceptions that patients may have about genetic disease, risk, and transmission and utilize concepts approaches to patient education.

4. Analyze pedigrees to appropriately identify diseases with familial inheritance patterns.

**B. Introduction to Population Health & Preventive Medicine**

Upon completion of this lecture and personal study, the PA student will be able to:

1. List the determinants of health.

2. Outline key preventative health supervision across the lifespan.

3. Examine the unique role played by the primary care providers as it pertains to maximizing preventative medicine.

4. Define and apply the principles of primary, secondary, and tertiary prevention.

5. Prioritize strategies in implementing preventive care, i.e. education and counseling, lifestyle considerations, medication, behavioral change.

6. Formulate strategies for providing and participating in preventive medicine within the schools and community.

7. Discuss factors utilized to determine preventative care recommendations and how clinical practice guidelines may be utilized in clinical decision making.
D. Epidemiologic Data Sources

Upon completion of this lecture and personal study, the PA student will be able to:

1. Identify the most common causes of preventable death in the US today and infer clinical implications from the standpoint of the primary care practitioner
2. Summarize preventive health measures for any given target population using evidence-based resources
3. Discuss and demonstrate how a practitioner may use data in a clinical practice setting, i.e. evidence-based approach
4. Differentiate immediate cause of death from underlying cause of death
5. Provide examples of disease processes that require mandatory reporting
6. Construct a health maintenance for theoretic patient scenarios

E. Screening for Disease States/Prevention

Upon completion of this lecture and personal study, the PA student will be able to:

1. Differentiate screening versus diagnostic testing and their relation to preventative health care
2. Outline the criteria that should be satisfied prior to adopting screening studies
3. Describe the difference between sensitivity, specificity, negative predictive value, and positive predictive value and predict how to utilize tests in clinical scenarios
4. Discuss the impact of disease prevalence on sensitivity, specificity, and the predictive value of a test
5. Describe the stages of disease and utilizing clinical examples, predict when it might be valuable to utilize a screening tool

F. Health Literacy

Upon completion of this lecture and personal study, the PA student will be able to:

1. Assess the functional health literacy on behalf of the patient
2. Discuss the consequences of inadequate health literacy in regard to patients
3. Utilize clinical-based strategies to effectively communicate with patients at varying levels of health illiteracy
4. Recommend healthcare resources and patient-directed informational materials for patient education

G. Promoting Behavioral Change

Upon completion of this lecture and personal study, the PA student will be able to:

1. Describe the transtheoretical (stages of change) model
2. Describe the principles of brief intervention and motivational interviewing
3. Examine the value of and utilize the following communication skills; open-ended questions, reflective listening, affirmation, summarization, and self-motivated statements
4. Assess a patient with reference to the stages of change and based on this assessment, interact appropriately, applying principles of the transtheoretical model

H. Tobacco Abuse & Smoking Cessation

Upon completion of this lecture and personal study, the PA student will be able to:

1. Identify populations most at-risk for nicotine addiction and develop appropriate prevention messages for these populations
2. Examine the relationship between tobacco abuse and disease
3. Apply methods to approach the subject of tobacco abuse in any clinical setting
4. Discuss the mechanism of action, pharmacokinetics, adverse effects, indications, and contraindications for the use of smoking cessation medications
5. Compile a list of community resources that are available to help with smoking cessation

I. Nutrition Issues

Upon completion of this lecture and personal study, the PA student will be able to:

1. Describe the goals of nutritional assessment including micronutrients and macronutrients in the primary care setting across the lifespan
2. Discuss the concepts of caloric balance and nutrient density
3. Apply dietary recommendations for prevention of the major chronic diseases to adequately educate patients
4. Understand the disease promoting qualities of the Western diet
5. Identify conditions amendable to dietary therapies and predict a nutritional plan to optimize health
6. Discuss approaches and provide counseling patients regarding healthy diets and strategies to improve dietary lifestyle
J. Obesity

Upon completion of this lecture and personal study, the PA student will be able to:

1. Define overweight, obesity and various body fat distribution formulas including BMI
2. Explain the relationship of environmental and genetic factors to the development of overweight and obesity
3. Describe the medical risks and complications associated with obesity
4. Apply treatment goals for clinical management of obesity
5. Formulate an obesity treatment plan to include life-style modification medical management and surgical management

K. Exercise Science

Upon completion of this lecture and personal study, the PA student will be able to:

1. Discuss guidelines for physical activity and describe the overall benefits of physical activity on health
2. Apply the evidence related to the relationship between physical activity and prevention of all-cause morbidity as well as chronic disease management in clinical scenarios
3. Educate and counsel the patient on the health benefits of physical activity
4. Establish personalized plans for physical activity for individual patients to accrue health benefits

L. Stress Management

Upon completion of this lecture and personal study, the PA student will be able to:

1. Discuss the role that stress plays in both physical and mental health Identify common signs and symptoms that result from stress
2. Discuss healthy and unhealthy approaches to stress management
3. Examine the unique role of the health care practitioner relative to positively impacting a patient's life regarding stress management
4. Discuss the mind-body connection in health promotion and disease prevention
5. Discuss how an integrative medicine approach to medicine can enhance health care delivery
M. Basics of Immunology

Upon completion of this lecture and personal study, the PA student will be able to:

1. Review the categories of infectious agents
2. Define the modes and routes of disease transmission
3. Define infection rates
4. Identify and discuss infectious disease outbreaks and the concept of an epidemic curve
5. Propose public health measures for controlling outbreaks

N. Immunizations I

Upon completion of this lecture and personal study, the PA student will be able to:

1. Discuss the history of immunizations including global impact on health care
2. Compare and contrast active versus passive immunity and describe advantages and disadvantages of both.
3. Describe the concept of herd immunity
4. Analyze immunization records to identify appropriate the need for routine vaccinations and formulate catch up plans for patients who are not up to date.
5. Identify vaccine specific contraindications

O. Immunizations II

Upon completion of this lecture and personal study, the PA student will be able to:

1. Investigate the literature regarding the controversy over the safety of vaccinations,
2. Formulate an approach to educating the parent and/or adolescent regarding immunizations through the discussion of evidences and responses to common vaccination resistance concerns
3. Identify vaccination program resources available in Wisconsin
## Course Schedule

*Schedule is subject to change*

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<tr>
<th>Date</th>
<th>Topic/System</th>
<th>Presenter</th>
<th>{May include reading or other information}</th>
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<tr>
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<td>Screening for Disease States</td>
<td>Schellinger</td>
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