Pathophysiology for Advanced Practice Nursing
NUR 805: Credits: 3 (3-0)
ANGEL On-line Format
Summer 2008

Course Description

Alterations of various physiological systems. Pathophysiology of frequently encountered primary care conditions across the life span and special populations. In-depth case analysis of risk factors, pathophysiological changes, and associated clusters of signs and symptoms. Pathophysiological theories and research as a basis for advanced practice nursing.

This is not an introductory pathophysiology course. It is expected that students already have a basic understanding of anatomy, physiology, pathophysiology, physical assessment, pharmacology, and pharmacokinetics.

Course Objectives

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

1. Analyze the etiology and pathophysiologial alternations associated with selected common primary care conditions across the life span.

2. Examine relevant theories and research as a basis for explaining the pathophysiological changes associated with common conditions in primary care.

3. Discuss the pathophysiological basis for development of clinical manifestations in selected common primary care conditions.

4. Discuss the issues and considerations associated with the pathophysiological changes in special populations.

5. Apply the pathophysiological principles to case situations as a basis for advanced practice nursing.

Prerequisites

Basic undergraduate anatomy, physiology and pathophysiology course; enrolled in a graduate nursing program.
Course Faculty

Linda J. Keilman, MSN, GNP, BC
Assistant Professor (HP)
Gerontological Nurse Practitioner

Faculty of Record
A126 Life Sciences Building
Office Hours Arranged
517/355-3365
keilman@msu.edu

Learning Methodologies

This online ANGEL course is built on a weekly framework of material including: guidepost and introduction to the week’s content, objectives, textbook readings, occasional required readings outside of the assigned text, quizzes, reaction activity or discussion question (participation/engagement), case studies and a final examination.

This course is not based on a self-paced learning model. Although assignments may be completed at any time during the week they are due, ALL materials need to be posted by 2355 (11:55 pm Eastern Standard Daylight Savings Time) on Saturday evening of each week.

We highly encourage students to participate throughout the week. Friday/Saturday only posts will not be eligible for full points as this is not considered engagement with classmates or faculty. As adult learners, it is expected that students will do relevant reading and study for the identified weekly topics. The expectation is that you will be prepared to participate/engage in the discussions and do so throughout the week.

Required Textbooks

The required pathophysiology text for the course is McCance & Huether (2006). You are also required to purchase the APA Manual which many of you will have as this is required in all College of Nursing graduate courses at Michigan State University. American Psychological Association. (2001). Publication manual of the American Psychological Association (5th ed.). Washington, DC: Author.

- This is the spiral bound edition which is easy to manipulate
- ISBN #: 10 – 1557988102 or 13 - 9781557988102
- This book comes with a CD which you will find very helpful!
- IBSN #: 978-0-323-03507-1

- ISBN #: 978-0-323-03623-8

**Recommended Textbooks**

Recommended books are faculty suggestions for information that “may” help you help yourself in learning difficult material. Recommended textbooks might be particularly of interest to those individuals having taken an undergraduate pathophysiology course more than 10 years ago. A lot has changed! See below!

**Pathophysiology**

- IBSN #: 978-0-323-04990-0

- IBSN #: 978-0-323-04989-4

- IBSN #: 978-0-7817-7912-8

- IBSN #: 978-1-58255-555-3

**APA**

- This is a spiral bound edition
Grading

Grades will be determined by adding all of the course activities together and arriving at a specific number (point total). The MSU 4.0 grading system will be utilized to report final course grades.

Points will be rounded to whole numbers using the 0.5 rule. Points at $\geq 0.5$ will be rounded up while those $< 0.5$ will be rounded down to the nearest whole number.

There is no opportunity for “extra credit” in this course.

The following point scale will be used for final grade determination:

<table>
<thead>
<tr>
<th>LOW</th>
<th>HIGH</th>
<th>%</th>
<th>GRADE</th>
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<tr>
<td>349</td>
<td>371</td>
<td>94 – 100</td>
<td>4.0</td>
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<tr>
<td>323</td>
<td>348</td>
<td>87 – 93</td>
<td>3.5</td>
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<td>297</td>
<td>322</td>
<td>80 – 86</td>
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<td>(passing – MSU CON)</td>
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<td>278</td>
<td>296</td>
<td>75 – 79</td>
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<td>260</td>
<td>277</td>
<td>70 – 74</td>
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<td>241</td>
<td>259</td>
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<td>Below 223</td>
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<tr>
<td>Introduction of Self</td>
<td>2</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Review Practice Quiz</td>
<td>5</td>
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<tr>
<td>Quiz</td>
<td>10</td>
<td>12</td>
<td>120</td>
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<tr>
<td>Participation/Engagement (Reaction to Discussion Forum Questions)</td>
<td>5</td>
<td>8</td>
<td>40</td>
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<tr>
<td>Case Study</td>
<td>10</td>
<td>5</td>
<td>50</td>
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<tr>
<td>Final Examination</td>
<td>150</td>
<td>1</td>
<td>150</td>
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<tr>
<td>Midterm Evaluation of Course &amp; Faculty</td>
<td>2</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Final Evaluation of Course &amp; Faculty</td>
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<td>1</td>
<td>2</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>371</strong></td>
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**Evaluation**

Evaluation strategies used may include: Participation/Engagement (your reaction to a question or assignment you need to complete in a Discussion Forum format), quizzes, case studies, final examination, active and positive weekly contribution, student activities, written assignments and online discussions.

Active, relevant, professional and ethical participation is expected. Each student will be evaluated ongoing during the semester.

Students must complete **every** assignment in order to pass NUR 805. It is not an option to not complete an assignment. Assignments include Participation/Engagement on Discussion Forums.

*Any assignment not completed may result in a 0.0 in the course*
If a student has an emergency situation, the expectation is the faculty of record (Keilman) will be contacted prior to the assignment due date to make alternative arrangements.

**Writing Requirement**

It is expected that students will engage in academic, scholarly dialogue on the discussion board. The minimum expectation for writing is at a graduate level. APA format is essential for citations of work and a reference list is required. For more information about APA requirements, and writing expectations, please go to the course in ANGEL, Course Documents, APA Guidelines.

Web sources such as Wikipedia and Epodunk are not considered scholarly or evidence-based and will not be accepted as sources within the course. Sources older than five years (unless considered by the discipline, a classic) will not be accepted.

**Access to ANGEL**

You can access the class by going to [http://angel.msu.edu](http://angel.msu.edu). The course will not open until the 1st day of the fall semester: **May 12, 2008 @ 0800** (Eastern Standard Daylight Savings time).

Technical problems with the use of ANGEL should be referred to the ANGEL help desk & not emailed to course faculty. The toll free ANGEL help line number is 1-800-1554 (North America and Hawaii), and the local campus area number is 1-517-355-2345.

The course will close **August 14, 2008 @ 1700** (5:00 pm ESDS).

**Academic Integrity**

Academic integrity is a minimal expectation of this course. *Academic dishonesty in any form will not be tolerated.* Any student involved in academic dishonesty will be reported to the Office of Student Support Services and the Office of Academic Affairs in the College of Nursing. A grade of 0.0 may be issued for the course.

Lectures, quizzes and examinations must remain the property of the College of Nursing and must not be copied from the internet. According to university policy, consequences for academic dishonesty may include failure of the course, expulsion from the major, or expulsion from the university.
Guideposts, case studies and Power Point lectures in the course are the intellectual property of faculty. You may copy for personal, study only purposes. Faculty materials may not be shared with others without first asking permission of the faculty author.

Online discussions and exercises are confidential and should not be discussed with others who are not enrolled in the class. It is important for each course participant to express his/her ideas. All ideas need to be respected in discussions and exercises. Any “group projects” that are required, still require individual work as a minimal expectation. Any submission that is deemed unprofessional, negative or inflammatory may be deleted by faculty.

For further information you can access any of the following sites:

- Academic Integrity resource at MSU [http://www.msu.edu/unit/ombud/RegsOrdsPolicies.html](http://www.msu.edu/unit/ombud/RegsOrdsPolicies.html)
- Information for Current Students – including Rights, Responsibilities and Regulations for Graduate Students [http://www.msu.edu/current/index.html](http://www.msu.edu/current/index.html)
- International Studies and Programs [http://www.msu.edu/international/index.html](http://www.msu.edu/international/index.html)

**MSU Academic Integrity Policy:** Article 2.3.3 of the Academic Freedom Report states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the College of Nursing adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the all-University Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations. (See Spartan Life: Student Handbook and Resource Guide and/or the MSU Web site: www.msu.edu.) Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including homework, lab work, quizzes, tests and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com web site to complete any course work in NUR 805.

Students who violate MSU rules may receive a penalty grade, including - but not limited to - a failing grade on the assignment or in the course. Contact the faculty of record for this course if you are unsure about the appropriateness of your course work.

See also [http://www.msu.edu/unit/ombud/honestylinks.html](http://www.msu.edu/unit/ombud/honestylinks.html)
**Plagiarism**

“Plagiarism (from the Latin plagiarius, an abductor, and plagiare, to steal) is defined by the White House Office of Science and Technology Policy on Misconduct in Research as “. . . the appropriation of another person’s ideas, processes, results or words without giving appropriate credit” (Michigan State University, Office of the Ombudsman – What Are MSU’s Policies on Plagiarism? [http://www.msu.edu/unit/ombud/plagiarism.html](http://www.msu.edu/unit/ombud/plagiarism.html)).

Academically dishonest behavior presents an ethical and moral dilemma in online learning. With easy access to expanded technology and abundant resources online, the magnitude of academic dishonesty has increased. In this course, it is expected that you will complete your own work and recognize the work of others through appropriate citations including quotation marks, page or paragraph numbers and references.

Paraphrasing means taking someone else’s ideas and words and correlating them to your own ideas - in your own words. Paraphrasing does NOT mean changing a word or two in someone else's sentence, changing the sentence structure while maintaining the original words, or changing a few words to synonyms. If you are tempted to rearrange a sentence in any of these ways, you are writing too close to the original. That's plagiarizing, not paraphrasing.

Paraphrasing is an acceptable way to use another person's ideas to support your argument as long as you attribute the material to the author and cite the source in the text at the end of the sentence. In order to make sure you are paraphrasing in the first place, take notes from your reading *with the book closed*. Doing so will make it easier to put the ideas in your own words.

In your individual work you should be able to demonstrate:

- A clear understanding of the material you've read
- Knowledge of scholarly, evidence-based resources that support the ideas you have developed
- Thorough analysis of the material from the textbook or acceptable resources that reflect your understanding

When you cite a source, you are using an expert's ideas as proof or evidence of a new idea that you are trying to communicate to the reader.

You need to cite a resource when:

- You put all direct quotes in quotation marks (requires a name, date & page number as well)
- You changed the words used by the author into synonyms
- You completely paraphrased the ideas to which you referred
- Your sentence is mostly made up of your own thoughts, but contains a reference to the author's ideas
- You mention the author's name in the sentence
• Generally, all statistics, numbers and facts require a citation

_The moral: When in doubt, provide a citation_

Here are two reliable web resources that you may want to investigate:
Michigan State University, Office of the Ombudsman – What Are MSU’s Policies on Plagiarism? [http://www.msu.edu/unit/ombud/plagiarism.html](http://www.msu.edu/unit/ombud/plagiarism.html)

Avoiding Plagiarism – the OWL at Purdue [http://owl.english.purdue.edu/owl/resource/589/01/](http://owl.english.purdue.edu/owl/resource/589/01/)

**On-Line Class Attendance**

Class attendance (in an on-line, virtual capacity), or presence, is considered the responsibility of the student and is an essential and intrinsic element of the academic process. Points will be earned each week for active participation. Lack of participation is not acceptable.

To be engaged in a course, one participates throughout the week – not on the last 2 days only. Active participation and engagement is valued for scholarly debate and dialogue which is essential in an on-line graduate science course.

A student’s absence from class does not relieve him/her from responsibility for punctual fulfillment of any course requirement including participation/engagement. Faculties are not under any obligation to repeat a test, teaching or information given which was missed because of discretionary absence. Each faculty has the responsibility of informing students of what portion of your final grade is determined by regular class attendance. In this course, weekly participation/engagement is considered mandatory.

**MSU Attendance Policy:** Students whose names do not appear on the official class list for this course may not attend this class. Students who fail to attend the first four class sessions or class by the fifth day of the semester, whichever occurs first, may be dropped from the course.

**Professionalism**

Preparation for the professional advanced practice of nursing requires more than the acquisition and application of knowledge. Therefore, in addition to the academic standards listed, the student must demonstrate:

1. Appropriate interpersonal relations and communication with peers, faculty and MSU College of Nursing staff
2. Respect for faculty and classmates
3. Responsible fulfillment of class obligations
4. Honesty and integrity in all academic and professional matters

Failure to meet any of the above criteria may result in the student earning a grade of 0.0 for the course.

College of Nursing policies regarding Professional Development Guidelines are found in CON Student Handbooks at the CON website. Students are responsible for the information found in the MSN CON Graduate Student Handbook.

**MSU Accommodations for Students with Disabilities Policy:** Students with disabilities should contact the Resource Center for Persons with Disabilities to establish reasonable accommodations. For an appointment with a disability specialist, call 353-9642 (voice), 355-1293 (TTY), or visit MyProfile.rcpd.msu.edu

**MSU Disruptive Behavior Policy:** Article 2.3.5 of the Academic Freedom Report (AFR) for students at Michigan State University states: "The student's behavior in the classroom shall be conducive to the teaching and learning process for all concerned." Article 2.3.10 of the AFR states that "The student has a right to scholarly relationships with faculty based on mutual trust and civility." General Student Regulation 5.02 states: "No student shall . . . interfere with the functions and services of the University (for example, but not limited to, classes . . .) such that the function or service is obstructed or disrupted. Students whose conduct adversely affects the learning environment in this classroom may be subject to disciplinary action through the Student Faculty Judiciary process.

Disruption for an on-line course environment includes submissions in the discussion board or weekly chat that are inflammatory, disrespectful or negative. If faculty deem a student's words to be unacceptable, the submission will be deleted and the student contacted by faculty.

**Library Information**

- Library Services: [http://www.lib.msu.edu/services](http://www.lib.msu.edu/services)
- MSU Library: [http://www.lib.msu.edu](http://www.lib.msu.edu)
- Proxy server: To access MSU library resources from an off-campus site, you must set up a proxy server. Directions to set up a proxy server are at: [http://techbase.msu.edu/viewpathfinder.asp?id=2507](http://techbase.msu.edu/viewpathfinder.asp?id=2507)
Access to Faculty

In a regular classroom setting, faculty are generally available to meet with students before or after class, during scheduled office hours, or if an appointment is made. In an online course setting, faculty is available to answer questions in a different manner. It may take up to 72 hours for faculty to respond to your questions – especially after 5:00 pm (1700), excluding weekends and holidays.

Faculties are not online 24 hours a day, 7 days a week. Expect a reasonable response time for your questions. Do not wait until the last minute to ask an important question – plan ahead!

Generally, faculty will not respond to Discussion Forums after 1700 (5:00 pm EDST) on Friday. Please write email in complete sentences; your emails are considered professional communication. Remember, you are not internet messaging to a friend. If you would like to make an appointment to meet face to face, please contact the faculty of record (course chair) – Linda Keilman.

Course Content, Textbook Readings, Topics & Activities

You will note that in the readings, for some chapters, you are required to read only select topics. The topics are listed after the chapter number. To locate the information, go to the 1st page of the chapter and look at the highlighted outline section. Students are responsible for reading all of the information under the topic heading except when told to “omit”. For example, the topic on Secondary Deficiencies includes pages 276 – 286 in chapter 8.

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<tr>
<th>WEEK DATE</th>
<th>UNIT</th>
<th>TEXTBOOK &amp; TOPIC READINGS</th>
<th>ACTIVITY</th>
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</table>
| **1** May 12 | • Introduction to the Course  
• Introduction to ANGEL Course Management System  
• Genes & Gene-Environment Interaction | **McCance**  
• Summary Reviews: pages 41 - 42; 87 - 88; 119 - 120; 206 - 208; 246 - 247  
• Chapter 4: pages 123-156  
• Chapter 5: pages 157-174 | • Introduction of Self  
• Review Quiz  
• P/E #1 |
| **2** May 18 | • Alterations in Immunity & Inflammation | **McCance**  
• Chapter 8: pages 249-291 | • Quiz #1  
• P/E #2 |
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<th>TEXTBOOK &amp; TOPIC READINGS</th>
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</table>
|           | • Infection  
|           | • Stress and Disease  | • Chapter 9: pages 293-309  
|           |                                     | • Chapter 10: pages 311-330  |          |
| 3 May 25  | • Biology of Cancer  
|                             | • Tumor Invasion & Metastasis  | McCance  
|                             |                                     | • Chapter 11: pages 333-370  
|                             |                                     | • Chapter 12 Topics (p.375): Tumor Spread (*omit 3-Step Theory*), Clinical Manifestations of Cancer  | Quiz #2  
|                             |                                     |                                           | CS #1    |
| 4 June 1  | • Hematologic System  | McCance  
|                             |                                     | • Chapter 25: pages 893-925  
|                             |                                     | • Chapter 26: pages 927-951  
|                             |                                     | • Chapter 27: pages 955-995  | Quiz #3  
|                             |                                     |                                           | P/E #3   |
| 5 June 8  | • Endocrine System  | McCance  
|                             |                                     | • Chapter 20: pages 655-680  
|                             |                                     | • Chapter 5 Topic (p.157): Diabetes Mellitus  
|                             |                                     | • Chapter 21 Topics (p.683): Mechanisms of Hormonal Alterations, Alterations of the H-P System, Diseases of the Anterior Pituitary (*only Hyperpituitarism*), Alterations of Thyroid Function (*omit Thyroid Carcinoma*), Alterations of Parathyroid Function, Dysfunction of the Endocrine Pancreas, Alterations of Adrenal  | Quiz #4  
<p>|                             |                                     |                                           | CS #2    |</p>
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| June 15   | Reproductive System| **McCance**  
- Chapter 22: pages 735-769  
- Chapter 23: pages 777-854 (omit cancers)  
- Chapter 24: pages 863-889 | Quiz #5  
P/E #4 |
| June 22   | Neurologic System  | **McCance**  
- Chapter 14: pages 411-445  
- Chapter 15 Topics (p.447): Pain  
- Chapter 17 Topics (p.547): Trauma (Pathophys, Manifestations, Evaluation) | Quiz #6  
P/E #5  
Midterm Course Evaluation |
<table>
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<tr>
<th>WEEK DATE</th>
<th>UNIT</th>
<th>TEXTBOOK &amp; TOPIC READINGS</th>
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<tr>
<td></td>
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<td>&amp; Treatment of Diffuse Brain Injury only), Degenerative Disorders of the Spine, Degenerative Disk Disease, Cerebrovascular Disorders (omit Vascular Malformations), Demyelinating Disorders, Peripheral Nervous System Disorders (omit Radiculopathies)</td>
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</table>
| 8 June 29 | • Cardiovascular & Lymphatic Systems Part I | *McCance*  
• Chapter 29: pages 1181 – 1203  
• Chapter 5 Topics (p. 157): Coronary Heart Disease, Hypertension  
• Chapter 30 Topics (p. 1081): Disease of the Arteries & Veins (omit Thromboangiitis Obliterans, Raynaud Phenomenon), Coronary Artery Disease, Myocardial Ischemia & Myocardial Infarction | • Quiz #7  
• P/E #6 |
| 9 July 6  | • Cardiovascular & Lymphatic Systems Part II | *McCance*  
• Chapter 30 Topics (p.1081): Disorders of the Pericardium, The Cardiomyopathies, Valvular Dysfunction, Heart Failure, Dysrhythmias | • Quiz #8  
• CS #3 |
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<th>WEEK DATE</th>
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<th>TEXTBOOK &amp; TOPIC READINGS</th>
<th>ACTIVITY</th>
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| 10 July 13| Pulmonary System       | • Chapter 31 Topics (p.1147): Defects Increasing Pulmonary Blood Flow *(omitting Atrioventricular Canal Defect)* | • Quiz #9   
|           |                       | • Chapter 32: pages 1181 - 1203                                                          | • P/E #7  |
|           |                       | • Chapter 33: pages 1205 – 1245                                                          |          |
| 11 July 20| Renal & Urologic System| **McCance**                                                                               | • Quiz #10 
|           |                       | • Chapter 35: pages 1279 – 1299                                                          | • P/E #8  |
|           |                       | • Chapter 36: pages 1301 – 1332                                                          |          |
| 12 July 27| Digestive System       | **McCance**                                                                               | • Quiz #11 
<p>|           |                       | • Chapter 38: pages 1353 – 1382                                                          | • CS #4   |
|           |                       | • Chapter 39 Topics (p.1385): Clinical Manifestations of GI Function, Disorders of Motility, Peptic Ulcer Disease <em>(omitting Stress-Related Mucosal Disease &amp; Surgical Tx of Ulcer)</em>, Inflammatory Bowel Disease, Clinical manifestations of Liver Disorders, Cirrhosis <em>(omitting Biliary Cirrhosis)</em>, |          |</p>
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<tbody>
<tr>
<td>Aug 3</td>
<td>Musculoskeletal System</td>
<td>Disorders of the Gallbladder, Disorders of the Pancreas, Cancer of the Colon &amp; Rectum</td>
<td>Quiz #12</td>
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<tr>
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<td>Integumentary System</td>
<td>• Chapter 40 Topics (1447): Pyloric Stenosis, Intussusception, Physiologic Jaundice of the newborn</td>
<td>CS #5</td>
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<td>McCance</td>
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<td>• Chapter 41: pages 1471 – 1494</td>
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<td>• Chapter 42 Topics (p. 1497): Musculoskeletal Injuries (<em>omit Rhabdomyolysis</em>), Osteoporosis, Osteoarthritis, Rheumatoid Arthritis</td>
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<tr>
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<td>• Chapter 43 Topics (p. 1547): Juvenile Rheumatoid Arthritis, Osgood-Schlatter Disease, Nonaccidental Trauma</td>
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<td>• Chapter 44: pages 1573 – 1604</td>
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<td>• Chapter 45: pages 1609 – 1620</td>
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<td>Aug 10</td>
<td>Review &amp; Wrap Up</td>
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<td>Final Examination</td>
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### Key

CS = case study

P/E = participation/engagement

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*Additional information related to the course can be found in ANGEL*