PATHOPHYSIOLOGY for the ADVANCED PRACTICE NURSE
NUR 805 sections 731 - 733
3 Credits
On-Line Course
Summer 2011

Catalog 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 evidence-based research as a basis for advanced practice nursing (APN).

Additional Course Description: NUR 805 is a graduate level course offered totally in an online ANGEL format. It is expected that the student already has sound foundational knowledge regarding anatomy, physiology, and basic pathophysiology. This knowledge should have been obtained through coursework as an undergraduate student and through providing hands-on nursing care in a variety of health care settings over a period of time.

Course Objectives:

At the end of this course, students will be able to:

1. Analyze the etiology and pathophysiological alterations 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/considerations associated with the pathophysiological changes in special populations.
5. Apply the pathophysiological principles to case situations as a basis for APN practice.

Prerequisites: None

Co-requisites: None
Professional Standards & Guidelines:

The curriculum is guided by the following documents:


Lead Faculty: Linda Keilman, DNP, GNP-BC
Assistant Professor (HP) & Gerontological Nurse Practitioner

Contact: 517/355-3365 or Toll Free # 1/800/605-6424
A 126 Life Sciences Building keilman@msu.edu

Faculty: Brigid Warren, MSN, RN, CS
Associate Professor

Contact: 517/353-8686 or Toll Free # 1/800/605-6424
A 106 Life Sciences Building brigid.warren@hc.msu.edu

Office Hours: Flexible – please contact Dr. Keilman or Professor Warren for an appointment;
times can be arranged to accommodate student & faculty schedules

Required Texts:


Recommended Texts:

**Optional Texts:** Optional or 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 5 years ago. A lot has changed! See below!


**Required Resources, References, Supplies:**

- ANGEL Help Line
  - 1-800/500-1554 (24 hrs, 7 days/week)
  - 517/355-2345 (24 hrs, 7 days/week)
- www.angel.msu.edu
- Always check the ANGEL Help Line first!

**Learning Methodologies:**

This online ANGEL course is built on a weekly framework of material including: a weekly lesson plan that includes the objectives, textbook readings, other required readings, key concepts and enrichment activities; a guidepost and introduction to the week’s content are also provided. Every week there is at least one activity for points.

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 [ESDST]) on Saturday evening of each week unless otherwise instructed by the faculty.

Active participation throughout specific weeks is the expectation. *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. It is expected that students will search literature outside of the assigned textbook readings and suggest/share relevant findings with faculty and classmates. If faculties post a question, the expectation is that it will be answered.
Library Information:

- Library Services: http://www.lib.msu.edu/services
- MSU Library: 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://msu.edu/viewpathfinder.asp?id=2507

Access to NUR 805 through ANGEL:

You can access the class by going to http://angel.msu.edu

The course will not open until the 1st day of the full summer semester: **May 16, 2011 @ 0800** (ESDST).

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 1-800-500-1554 (North America and Hawaii), and the local campus area number is 1-517-355-2345.

If you have difficulty during a timed assignment, you need to contact the ANGEL Help Desk so a communication log is created. If you do not do this, faculty have no way to determine that you actually experienced problems and you may not be allowed to resubmit your work.

**The course will close August 5, 2011 @ 1700** (5:00 pm, ESDST).

Evaluation/Grading Scale:

Grades will be determined by adding all of the course activities together and arriving at a specific number (point total). *This course is founded on points – not percentages!* 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 rules. Points at ≥ 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” or “make up work” in this course. Late work will not be accepted.

*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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<tbody>
<tr>
<td>338</td>
<td>360</td>
<td>94 – 100</td>
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<tr>
<td>313</td>
<td>337</td>
<td>87 – 93</td>
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<tr>
<td>288</td>
<td>312</td>
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<tr>
<td>252</td>
<td>269</td>
<td>70 – 74</td>
<td>2.0</td>
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<tr>
<td>234</td>
<td>251</td>
<td>65 – 69</td>
<td>1.5</td>
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<tr>
<td>216</td>
<td>233</td>
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<tr>
<td>215</td>
<td>Below 60</td>
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Point Determination Will Be As Follows:

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<th>NUMBER</th>
<th>TOTALS</th>
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<tbody>
<tr>
<td>Introduction of Self</td>
<td>5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Review Practice Quiz</td>
<td>10</td>
<td>1</td>
<td>10</td>
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<tr>
<td>Quiz</td>
<td>10</td>
<td>10</td>
<td>100</td>
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<tr>
<td>Participation/Engagement (P/E) (ANGEL Discussion Forum)</td>
<td>10</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Case Study</td>
<td>20</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>Final Examination</td>
<td>150</td>
<td>1</td>
<td>150</td>
</tr>
<tr>
<td>Final Evaluation of Course &amp; Faculty</td>
<td>5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>360</td>
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Evaluation Methods & Parameters:

A grade of 3.0 must be achieved in order to pass NUR 805. A score of 120/150 (or 80%) must be achieved on the final examination (*MSU College of Nursing NP track students only*).

Evaluation strategies used may include: your reaction (participation/engagement) in the Discussion Forums, answers to posted questions, quizzes, case studies, final examination, active & positive contributions that are professional & ethical; positive communication with faculty & peers; other written assignments.

Active, relevant, professional and ethical participation (in class, via e-mail, online, by telephone, or in person) is expected. Each student will be evaluated ongoing during the semester.

Communication that is deemed unprofessional, unacceptable, negative or detrimental to student learning may be deleted from the course by the faculty. Any communication that is deleted will not count towards earning course points.

**Late assignments will not be accepted & 0 points will be assigned to the activity.**

Students must complete every assignment, in a timely manner, in order to pass NUR 805. It is not an option to not complete an assignment. *Any assignment not completed may result in a failure in the course.*

If a student has an emergency situation, the expectation is the lead faculty (Dr. Keilman) will be contacted prior to the assignment due date and time to make alternative arrangements.

Assignments submitted as .pdf files/documents will not be accepted & 0 points will be assigned to the activity.
Directions for submission of case studies & all other written work must be followed for formatting accuracy. Documents not submitted utilizing the course format will either not be accepted or ½ the total possible points will be subtracted from the submission per faculty discretion.

**Writing Requirements:**

It is expected that students will engage in academic, scholarly dialogue on the discussion board at all times. *The minimum expectation for writing is at a graduate level.* APA format is essential for citations of work and a reference list is required. This is a minimum academic standard for this course.

Accurate APA formatting must be utilized in the course. Formatting is evaluated based on the 6th edition, 2nd printing (2010) of the APA Manual – which is a required textbook for the course.

Web sources such as Wikipedia, Epodunk and wikis 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. Community nursing and medical-surgical textbooks are not appropriate resources to cite for this graduate-level course.

**University & College Policies:**

The College of Nursing expects that students will demonstrate professional behavior in all situations. Specific expectations for clinical and other professional venues can be found in the appropriate handbook. You are responsible for reviewing and acting in accordance with the policies and procedures found in the following sources, including the following topics: Professionalism, Academic Integrity, Accommodations for Students with Disabilities, Disruptive Behavior, Attendance, Compliance, and Progression.

- CON Student handbook  http://nursing.msu.edu/handbooks.asp
- MSU Spartan Life Student Handbook and Resource Guide  
  http://www.vps.msu.edu/SpLife/index.htm
- Information for Current Students—including Rights, Responsibilities and Regulations for Students http://www.msu.edu/current/index.html
- Academic Programs  http://www.reg.msu.edu/UCC/AcademicPrograms.asp

**Academic Integrity:**

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

All course materials and activities 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.

All faculty generated materials 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.

Quizzes or the examination should not be entered before you are ready to take them and submit your answers. Other windows should not be open on your computer during the quiz or exam time. It is imperative that when you open the quiz or exam window, you are prepared to answer the questions in the allotted time frame and submit for evaluation. Always clear your cache and cookies prior to entering ANGEL.

No books, notes, individuals, or web surfing can be allowed during quizzes/exams; it will not be tolerated. The ANGEL program is able to track access and opening of additional windows. Please do not be tempted to engage in unethical behavior as it will potentially result in no points being awarded for the work and a potential failure for the course.

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

- Academic Integrity resource at MSU
  http://www.msu.edu/unit/ombud/RegsOrdsPolicies.html
- MSU Spartan Life Student Handbook and Resource Guide
  http://www.vps.msu.edu/SpLife/index.htm
- International Studies and Programs
  http://www.msu.edu/international/index.html

Students 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. You may not utilize a previous students work or faculty materials and submit as your own.

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 lead faculty for this course if you are unsure about the appropriateness of your course work.

See also http://www.msu.edu/unit/ombud/honestylinks.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 ww.allmsu.com web site to complete any course work in NUR 805.

**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? Retrieved from  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 and unique individualism

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:

- Avoiding Plagiarism – the OWL at Purdue 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 are earned for active and in-depth participation. Lack of participation is not acceptable. Communication that is not scholarly or academic in nature is not acceptable. Minimal work will earn minimal points.

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, participation 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 nurse (APN) requires more than the acquisition and application of knowledge. Therefore, in addition to the academic standards listed, the student must demonstrate:

- Appropriate interpersonal relations and communication with peers, faculty and MSU College of Nursing staff
- Respect for faculty and classmates
- Responsible fulfillment of all class obligations
- Honesty and integrity in all academic and professional matters
- The ability to interact with course faculty when there are questions and/or concerns regarding evaluation; the faculty of record should always be contacted first!!

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.
The American Nurses Association (ANA) Code of Ethics must be followed at all times. The Code, with Interpretive Statements, may be found (for viewing only) at http://www.nursingworld.org/ethics/code/protedtec_nwcoe303.htm

**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.

**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, faculties are 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 ESDST) on Friday. Please write e-mail 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 Dr. Keilman.
## Course Content, Textbook Readings, Topics & Activities:

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<thead>
<tr>
<th>WEEK &amp; DATE</th>
<th>UNIT</th>
<th>TEXTBOOK &amp; TOPIC READINGS</th>
<th>ACTIVITY</th>
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</table>
| 1 May 16    | • Introduction to the Course & the ANGEL Course Management System  
• Cellular Biology *(Review)*  
• Altered Cellular & Tissue Biology *(Review)*  
• The Cellular Environment *(Review)*  
• Genes & Genetic Diseases  
• Genes, Environment & Common Diseases  
• Innate Immunity: Inflammation *(Review)*  
• Adaptive Immunity *(Review)*  
• Alterations in Immunity & Inflammation *(Review)*  
• Infection *(Review)*  
• Stress & Disease *(Review)* | *McCance & Huether*  
• Chapter 1: pages 1-44  
• Chapter 2: pages 46-93  
• Chapter 3: pages 96-125  
• Chapter 4: pages 126-162  
• Chapter 5: pages 164-181  
• Chapter 6: pages 183-215  
• Chapter 7: pages 217-254  
• Chapter 8: pages 256-290 *(skip pages 286-288)*  
• Chapter 9: pages 293-334  
• Chapter 10: pages 336-356 | • Introduction of Self  
• Review Quiz |
| 2 May 22    | • Biology, Clinical Manifestations & Treatment of Cancer  
• Cancer Epidemiology  
• Structure & Function of the Hematologic System *(Review)*  
• Alterations of Erythrocyte Function  
• Alterations of Leukocyte, Lymphoid & Hemostatic Function | *McCance & Huether*  
• Chapter 11: pages 360-394  
• Chapter 12: pages 396-431  
• Chapter 25: pages 952-987  
• Chapter 26: pages 989-1012  
• Chapter 27: pages 1014-1059 | • Quiz #1  
• P/E #1 |
| 3 May 29    | • Mechanisms of Hormonal Regulation *(Review)*  
• Alterations of Hormonal Regulation  
• Structure & Function of the Reproductive Systems *(Review)*  
• Alterations of the Reproductive Systems  
• Sexually Transmitted Infections | *McCance & Huether*  
• Chapter 20: pages 696-724  
• Chapter 21: pages 727-775 *(skip pages 765-772)*  
• Chapter 22: pages 781-814  
• Chapter 23: pages 816-912  
• Chapter 24: pages 923-950 | • Quiz #2  
• CS #1 |
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<th>TEXTBOOK &amp; TOPIC READINGS</th>
<th>ACTIVITY</th>
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</table>
| 4 June 5    | • Structure & Function of the Neurologic System *(Review)*  
              • Pain, Temperature Regulation, Sleep & Sensory Function  
              • Alterations in Cognitive Systems, Cerebral Hemodynamics & Motor Function | *McCance & Huether*  
              • Chapter 14: pages 442-478  
              • Chapter 15: pages 481-520  
              • Chapter 16: pages 525-579 | • Quiz #3 |
| 5 June 12   | • Disorders of the Central & Peripheral Nervous Systems & The Neuromuscular Junction  
              • Neurobiology of Schizophrenia, Mood Disorders & Anxiety Disorders | *McCance & Huether*  
              • Chapter 17: pages 583-642  
              • Chapter 18: pages 646-663 | • Quiz #4  
              • P/E #2 |
| 6 June 19 MT| • Structure & Function of the Cardiovascular & Lymphatic Systems *(Review)* | *McCance & Huether*  
              • Chapter 29: pages 1091 – 1140 | • Quiz #5 |
| 7 June 26   | • Alterations of Cardiovascular Function  
              • Alterations of Cardiovascular Function in Children | *McCance & Huether*  
              • Chapter 30: pages 1142-1203  
              • Chapter 31: pages 1209-1225; 1237-1240 | • Quiz #6  
              • CS #2 |
| 8 July 3    | • Structure & Function of the Pulmonary System *(Review)*  
              • Alterations of Pulmonary Function  
              • Alterations of Pulmonary Function in Children | *McCance & Huether*  
              • Chapter 32: pages 1242-1264  
              • Chapter 33: pages 1266-1306  
              • Chapter 34: pages 1310-1316; 1320-table on 1321; 1326-1336; 1339-1340 | • Quiz #7 |
| 9 July 10   | • Structure & Function of the Renal & Urologic Systems *(Review)*  
              • Alterations of Renal & Urinary Tract Function  
              • Alterations of Renal & Urinary Tract Function in Children | *McCance & Huether*  
              • Chapter 35: pages 1344-1363  
              • Chapter 36: pages 1365-1398  
              • Chapter 37: pages 1402-1416 | • Quiz #8  
              • P/E #3 |
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<th>TEXTBOOK &amp; TOPIC READINGS</th>
<th>ACTIVITY</th>
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</thead>
</table>
| 10 July 17  | • Structure & Function of the Digestive System *(Review)*  
               • Alterations of Digestive Function  
               • Alterations of Digestive Function in Children  
               *McCance & Huether*  
               • Chapter 38: pages 1420-1449  
               • Chapter 39: pages 1452-1498; 1505-1508  
               • Chapter 40: pages 1516-1529; 1531; 1532; 1535-1536  
               • Quiz #9  
               • CS #3 | | |
| 11 July 24  | • Structure & Function of the Musculoskeletal System *(Review)*  
               • Alterations of Musculoskeletal Function  
               • Alterations of Musculoskeletal Function in Children  
               *McCance & Huether*  
               • Chapter 41: pages 1540-1565  
               • Chapter 42: pages 1568-1588; 1592-1609; 1613-1614  
               • Chapter 43: pages 1618-1624; 1628-1633; 1641  
               • Quiz #10 | | |
| 12 July 31  | • Structure, Function *(Review)*  
               & Disorders of the Integument  
               • Alterations of the Integument in Children  
               • *Review & Wrap Up*  
               *McCance & Huether*  
               • Chapter 44: pages 1644-1676  
               • Chapter 45: pages 1680-1693  
               • Final Exam  
               **Wednesday August 3rd**  
               **1200 – 1600**  
               • Final Course Evaluation | | |

*The ANGEL course will no longer be available after August 5, 2011 @ 1700*