Clinical Pathophysiology  
NUR301, Section 001  
A131 Life Sciences  
3 credits, Fall 2016

I. Catalog Course Description  
How disrupting normal structures and functions of the human body leads to disease processes from the cellular to the multi-system level. Critical examination of the mechanisms underlying signs and symptoms of diseases.

II. Course Objectives  
1. Describe mechanisms of health dysfunction as deviations from or interruptions to normal body structure and/or function.  
2. Explain and diagram how underlying disease processes produce manifestations, including abnormal lab values.  
3. Explain and diagram how adaptive/compensatory mechanisms attempt to restore normal structure and/or function, and how they produce manifestations.  
4. Explain and diagram how dysfunction of one body system affects function of another body system.  
5. Explain and diagram how risk factors modify normal anatomy and/or physiology to promote dysfunction.  
6. In select states of dysfunction, explain and diagram how treatment targets part of the underlying process.  
7. In select states of dysfunction, explain and diagram how diagnostic tests elucidate the underlying process.  
8. Incorporate liberal education principles to application, synthesis and evaluation of course concepts.

III. Additional Course Detail  
NUR301 explores how mechanisms from the molecular to the multi-system level disrupt normal cellular biology, anatomy, and physiology to produce dysfunction, how those processes produce manifestations, and how the body compensates. Learners actively engage course content, with independent preparation for each unit and with class analysis of patient cases. In class, students work with peers to think critically about course content, analyze patient cases, and apply pathophysiologic mechanisms. The course structure requires students to practice skills that are used by health care professionals such as analyzing cases, solving problems, using evidence based resources, and learning independently.

IV. Prerequisites:  
ANTR 350 and {PSL 310 or PSL 250 or (PSL 431 and 432)}

V. Co-requisites:  
none

VI. Standards Documents:  The CON BSN curriculum is guided by the following documents.

[http://www.aacn.nche.edu/education-resources/BaccEssentials08.pdf](http://www.aacn.nche.edu/education-resources/BaccEssentials08.pdf)


VII. Course Faculty:
Della Hughes-Carter, RN, DNP, GNP-BC
A270 Life Sciences 517.432.6673
Office Hours: Wednesdays 1 -3pm

Gretchen Schumacher, PhD, GNP-BC, FNP, NP-C
A108 Life Sciences 517-353-2183
Gretchen.schumacher@hc.msu.edu
Office Hours: Mondays or Wednesdays 1-3 or by appointment

VIII. Instruction
a. Methodology: Attendance to class periods is essential to achieving success and meeting the objectives of the course. The course content will be found in D2L Course Management System.

b. Writing Requirements: Use of APA Style formatting is required for all written assignments. Written work is expected to be clear, concise and professional.

c. Use of laptops, iPads, and other online devices Students will no longer have the option of using laptops, IPADs, tablets, smart phones or other electronic online devices during theory classes unless instructed by the faculty member for a specific assignment. Students are encouraged to refrain from printing out the PPT slides. To facilitate note-taking faculty will number each slide enabling students to readily link slides with written notes. No Taping of lectures or presentations without instructor consent. You will be allowed to use your laptop to take the quizzes and exams only.

IX. Course Materials
Please read carefully through this entire section before making purchases.

Check List Summary
☐ Porth’s Essentials of Pathophysiology 4th ed
☐ PrepU for 4th Ed Essentials of Pathophysiology with ≥ 6 month access (CoursePoint is an optional bundle = Essentials of Pathophys 4th ed as e-text only + PrepU)
☐ Medical Dictionary
☐ Adobe Reader
☐ D2L access with reliable, high-speed connection
☐ NUR301 Library Guide access at http://libguides.lib.msu.edu/nur301 (also in D2L)
☐ CON Technology Requirements (BSN Handbook; NUR301 students need to be in compliance.)

a. Required Texts
Students must have access to the course text, both in and out of class, and may choose their preferred format (ISBN can vary among formats). Both a hard copy and a downloadable, electronic copy are available. The electronic copy can also be bundled with PrepU in a product called CoursePoint (see below). Students must keep their pathophysiology texts to use throughout clinical courses, so previous editions are not recommended.

Each semester, students ask about using different versions of the required text. Porth’s Pathophysiology: Concepts of Altered Health States 9th edition (ie. “big Porth” ISBN 978-1-4511-4600-4), is an appropriate substitute but, for some content areas, will have more detail than is required which may get confusing.

Students must also have access to PrepU – an adaptive quizzing extension of the textbook which you can purchase separately or bundled with the e-text in CoursePoint. Students need to have active PrepU accounts the day after course orientation. Students can use PrepU for self-check and active study; we will also be using the adaptive quizzing feature for required prep quizzes.

ISBN 978-1-4698-8170-6
PrepU for 4th ed of Essentials of Pathophysiology
http://tinyurl.com/PrepU4thedPorth

After you purchase the PrepU access code, go to www.thepoint.lww.com, click on New User, and set up your LWW account using your MSU email. Then, go into your PrepU, click on “My Classes” and enter the class code A57A62A5 in the Class Code field to link your PrepU account to NUR301. The class code is A57A62A5. (Note that the class code is different from purchasing the access code for the program.)

To summarize: purchase PrepU access code → log into thePoint → New User → create LWW account with MSU email → log into thePoint → click on PrepU → enter A57A62A5 in the Class Code field.

The most cost-effective option may be to purchase a bundled package called CoursePoint (purchase access code then follow same PrepU access instructions above). It includes PrepU access and the downloadable electronic version of the text. (No internet connection required for use after download).

Porth Essentials of Pathophysiology 4e CoursePoint
http://tinyurl.com/CoursePoint4thedPorth

Contact Wolters Kluwer Customer Support for all purchase questions: 1.800.638.3030

And

Online support: 1-800-468-1128 or techsupp@lww.com

You can access a medical dictionary for no fee via the MSU Libraries. Taber’s Cyclopedic Medical Dictionary has an audio feature that lets you hear the proper pronunciation of terms and is endorsed by the CON BSN curriculum. Here’s the stable link that may require MSU login:

http://online.statref.com.proxy1.cl.msu.edu/Notes/ResolveNote.aspx?NoteID=69059&grpalias=MLC

or

find it in the NUR301 Library Guide at http://libguides.lib.msu.edu/nur301

b. Other Resources, References, Supplies

Students need a recent version of Adobe Reader to download and access PDF documents.

Frequently Called Telephone Numbers
Desire2Learn Helpline
1.800.500.1554 (24 hrs, 7 days/week)
517.355.2345 (24 hrs, 7 days/week)
http://help.d2l.msu.edu/
Always check with the Help Line first!

Simulation Lab in Life Sciences: 517.355.5765 (with answering machine)
Media Lab (Andy Greger) Life Sciences: 517.353.9020
College of Nursing Office of Student Support Services in C120 Bott Building: 517.353.4827
PrepU Tech Support: 1-800-468-1128  http://thepoint.lww.com/ContactUs

In addition to Taber’s medical dictionary, you will find e-texts on cell biology and biochemistry, physiology, anatomy, and pharmacology.  http://libguides.lib.msu.edu/nur301

X. Evaluation

a. Course grade will be determined based on the following assignments and assessments. In order to pass the course students must achieve a cumulative grade of ≥75%.

<table>
<thead>
<tr>
<th>ITEMS GRADED</th>
<th>WEIGHT (% OF COURSE GRADE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery Quiz on Prep-U</td>
<td>8 quizzes worth 2.5% each when Mastery Level is achieved For a total of 20%</td>
</tr>
<tr>
<td>4 Exams</td>
<td>Exam 1 = 15%</td>
</tr>
<tr>
<td></td>
<td>Exam 2 = 15%</td>
</tr>
<tr>
<td></td>
<td>Exam 3 = 15%</td>
</tr>
<tr>
<td></td>
<td>Exam 4 = 15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Final Exam = 20%</td>
</tr>
</tbody>
</table>

b. Grading Scale: This course uses the Standard College of Nursing grading scale.

<table>
<thead>
<tr>
<th>%</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>94-100 %</td>
<td>4.0</td>
</tr>
<tr>
<td>89-93.99%</td>
<td>3.5</td>
</tr>
<tr>
<td>84-88.99%</td>
<td>3.0</td>
</tr>
<tr>
<td>79-83.99%</td>
<td>2.5</td>
</tr>
<tr>
<td>75%-78.99%</td>
<td>2.0</td>
</tr>
<tr>
<td>(Minimum passing grade)</td>
<td></td>
</tr>
<tr>
<td>70%-74.99%</td>
<td>1.5</td>
</tr>
<tr>
<td>65%-69.99%</td>
<td>1.0</td>
</tr>
<tr>
<td>&lt;65%</td>
<td>0.0</td>
</tr>
</tbody>
</table>

CON does not round Course Grades. (eg. 93.9% = 93% = 3.5)

For specific information regarding grading related to student progression through the curriculum, please reference the “Progression through the Major Policies” section of the Baccalaureate Student Handbook.

c. Examinations

a. Tardiness: If a student is late, he/she will only be allowed the allotted time remaining to complete the exam.

b. Absences: Students must notify course faculty of any absence prior to the start of the exam.
c. Excused absence: Absence from an exam may be excused for such reasons as a family death, serious family illness, court mandated appearance, and personal illness (requiring HCP documentation). Excused absence must have appropriate documentation in order to be excused. Course faculty will make the determination of whether an absence is excused if it meets the above criteria.

d. Unexcused Absence: No make-up exam will be scheduled. Student will receive a zero grade.

e. Make-up Exam (for excused absence only):
   i. Students must contact the faculty member to schedule the make-up examination. The exam must be made-up within 1 week of the original examination date; any extension beyond 1 week is at the discretion of faculty and would only occur in the event of extraordinary circumstances. Faculty will determine the date and time of the make-up exam.
   ii. Make-up exams may differ from the original exam and include, for example, essay, short answer, matching, and true/false type questions.

f. Proctor Process: See the BSN Student Handbook for the proctoring process.

Each exam assesses all units listed on the course calendar since the previous exam. However, due to the inter-connected nature of pathophysiology, understanding of units assessed on previous exam(s) will be necessary. For example, understanding hypertrophy (Exam X) is necessary to explain cardiac compensation for hypertension (tested on Exam Y).

d. In Class Activities: These are randomly placed throughout the semester and are meant to engage the student in active learning. Examples include: case studies, open book and closed book questions, mapping, teach back, algorithms and other. Please complete the readings and activities listed in D2L prior to class to facilitate your success of the In Class Activities.

e. Honors Option: There are no H-Options available for NUR301 this semester.

XI. Course, College and University 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 BSN Student Handbook: http://nursing.msu.edu/BSN%20Programs/Handbooks/default.htm
   o Includes Professional Development Guidelines
   o Students are responsible for the information found in the CON BSN Student Handbook.

MSU Spartan Life Online: http://www.vps.msu.edu/SpLife.

Information for MSU Students: http://www.msu.edu/current/index.html

Academic Programs: http://www.reg.msu.edu/AcademicPrograms

Code of Teaching Responsibility and Student Assessments and Final Grades: http://www.reg.msu.edu/AcademicPrograms/Print.asp?Section=514

Integrity of Scholarship and Grades: http://www.reg.msu.edu/AcademicPrograms/Print.asp?Section=534

a. Grief Policy

The faculty and staff should be sensitive to and accommodate the bereavement process of a student who has lost a family member or who is experiencing emotional distress from a similar tragedy so that the student is not academically disadvantaged in his/her classes.

It is the responsibility of the student to:
a) notify the Associate Dean by completing the grief absence request form  
b) complete all missed work as determined by the instructor

It is the responsibility of the Associate Dean or designee to:
a) determine with the student the expected period of absence – it is expected that some bereavement processes may be more extensive than others depending on individual circumstances
b) notify the faculty that the student will be absent
c) receive verification of the authenticity of a grief absence request upon the student’s return

It is the responsibility of the instructor to work with the student to:
a) make reasonable accommodations
b) to include appropriate language describing such accommodations in their course syllabus, so that the student is not penalized due to a verified grief absence. Students who believe their rights under this policy have been violated should contact the University Ombudsperson.

b. Accommodations for Students with Disabilities
Students with disabilities should contact the Resource Center for Persons with Disabilities to establish reasonable accommodations. https://www.rcpd.msu.edu/ Students who use RCPD accommodations must adhere to the RCPD policies and procedures.

c. Academic Integrity
Whenever the academic environment includes written work, students and professors (yes, professors, too!) are at risk of plagiarizing. Students are expected to read the information on D2L in the Course Info folder related to plagiarism and academic dishonesty. The response of “I didn’t know that what I was doing was plagiarism” will not be accepted. Academic integrity is also expected when taking assessments.

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 adheres to the policies on academic honesty as specified in General Student Regulations 1.0 on Protection of Scholarship and Grades, the all-University Policy on Integrity of Scholarship and Grades, and Ordinance 17.00 on Examinations. (See Spartan Life: Student Handbook and Resource Guide http://splife.studentlife.msu.edu/ 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 or other similar sites to complete any course work for this course. Students who violate course, College, or University policy may receive a penalty grade, including – but not limited to – a failing grade on the assignment or in the course. Contact your instructor if you are unsure about the appropriateness of your course work. See also: https://www.msu.edu/unit/ombud/academic-integrity/index.html#regulations

d. Professionalism and Disruptive Behavior
Please keep in mind that you are preparing for your future as a health care professional, and treat our virtual classroom space and F2F space as you would any other professional setting. This includes being mindful of your communication style, both verbal and written. On discussion boards, please be mindful of “netiquette” – a set of social guidelines for cyber-interaction, the most important of which emphasize respecting the people behind the computers. If you are feeling angry/frustrated/emotional while typing a communication, save the message and proof it later before sending/posting. Any online communication that is interpreted as being disrespectful, inappropriate, or inflammatory may be deleted from the course. The
An individual student will be asked to reword and repost the communication. Please remember to follow the Discussion Board Guidelines.

Additionally, please don’t be rude. This includes but is not limited to: using a cell phone or other electronic communication for non-course purposes, engaging social media, accessing web sites not related to course work, coming to class late or leaving class early, talking about non-case related topics, having side conversation when somebody is addressing the class, etc. Disruptive behavior will be addressed and the student may be asked to leave the classroom. Leaving the classroom will count as an absence, regardless of how much class time is missed. Unless you are using your phone for NUR301 course work, it should be turned off and put away. Texting during class is rude to classmates and rude to your instructor. If you choose to use your phone for non-course related purposes, you will be asked to put it in the front of the room until class ends or you will be asked to leave class.

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 that “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.

c. **Attendance:** On time attendance at all scheduled class sessions is required.

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. See the Ombudsman’s website for a discussion of student observance of major religious holidays, student-athlete participation in athletic competition, student participation in university-approved field trips, medical excuses and a dean’s drop for students who fail to attend class sessions at the beginning of the semester.

**XII. Communication**

**Course Announcements** will be posted in D2L.

**XIII. For Additional Help**

Students who are either failing (i.e. <2.0) or who are not performing at his/her personal expectations at any time during the semester should seek immediate help from one or more of the following sources, and should continue to access help until the student is achieving a passing grade and performing at his/her expectations:

- Course Professors
- Fellow classmates
- Jessica DeForest, MSU Learning Resources Center 202 E. Bessey 517.355.2363. Jessica is particularly good at helping students with study strategies and with test taking skills. MSU’s Learning Resource Center may have additional help.
- CON Office of Student Support Services 1.800.605.6424 or 517.353.4827

**XIV. Course Calendar:** Please see the following page.

MSU’s Academic Calendar: [http://www.reg.msu.edu/ROInfo/Calendar/academic.aspx](http://www.reg.msu.edu/ROInfo/Calendar/academic.aspx)
<table>
<thead>
<tr>
<th>Week #</th>
<th>Date</th>
<th>Topic</th>
<th>Reading Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>August 31</td>
<td>Orientation to Course; Cellular Response to Stress, Injury and Aging</td>
<td>Dr. Hughes Ch. 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ch. 1 is review</td>
</tr>
<tr>
<td>2</td>
<td>Sept 5</td>
<td><strong>Labor Day, Enjoy!!!</strong></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sept 7</td>
<td>Inflammation Cell Proliferation, Tissue Regeneration and Repair</td>
<td>Dr. Schumacher Ch. 3 &amp; 4</td>
</tr>
<tr>
<td>3</td>
<td>Sept 12</td>
<td>Mastery Quiz in Prep-U #1 opens (closes on Sept 17th at 11:30pm) Neoplasia</td>
<td>Dr. Hughes Ch. 7, p 74-75</td>
</tr>
<tr>
<td>3</td>
<td>Sept 14</td>
<td>Infection and Immune Dysfunction</td>
<td>Dr. Hughes Ch. 14, 15 &amp; 16</td>
</tr>
<tr>
<td>4</td>
<td>Sept 19</td>
<td>Exam 1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sept 21</td>
<td>Acid-Base Dysfunction</td>
<td>Dr. Schumacher Ch. 8</td>
</tr>
<tr>
<td>5</td>
<td>Sept 26</td>
<td>Mastery Quiz in Prep-U #2 opens (closes on Oct 1st at 11:30pm) Hematopoietic Dysfunction I</td>
<td>Dr. Hughes Ch. 11 &amp;12</td>
</tr>
<tr>
<td>5</td>
<td>Sept 28</td>
<td>Hematopoietic Dysfunction II</td>
<td>Dr. Hughes Ch. 13</td>
</tr>
<tr>
<td>6</td>
<td>Oct 3</td>
<td>Fluid and Electrolyte Dysfunction</td>
<td>Dr. Schumacher Ch. 8</td>
</tr>
<tr>
<td>6</td>
<td>Oct 5</td>
<td>Exam 2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Oct 10</td>
<td>Mastery Quiz in Prep-U #3 opens (closes on Oct 15th at 11:30pm) Gastrointestinal and Accessory Organ Dysfunction I</td>
<td>Dr. Schumacher Ch. 28 &amp; 29</td>
</tr>
<tr>
<td>7</td>
<td>Oct 12</td>
<td>Gastrointestinal and Accessory Organ Dysfunction II</td>
<td>Dr. Schumacher Ch. 30</td>
</tr>
<tr>
<td>8</td>
<td>Oct 17</td>
<td>Mastery Quiz in Prep-U #4 opens (closes on Oct 22nd at 11:30pm) Endocrine Dysfunction I</td>
<td>Dr. Hughes Ch. 31 &amp; 32</td>
</tr>
<tr>
<td>8</td>
<td>Oct 19</td>
<td>Endocrine Dysfunction II</td>
<td>Dr. Hughes Ch. 33</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
<td>Topic</td>
<td>Instructor</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>9</td>
<td>Oct 24</td>
<td>Urinary and Renal Dysfunction</td>
<td>Dr. Hughes</td>
</tr>
<tr>
<td>9</td>
<td>Oct 26</td>
<td>Exam 3</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Oct 31</td>
<td>Integumentary Dysfunction</td>
<td>Dr. Hughes</td>
</tr>
<tr>
<td>10</td>
<td>Nov 2</td>
<td>Cardiovascular Dysfunction I</td>
<td>Dr. Schumacher</td>
</tr>
<tr>
<td>11</td>
<td>Nov 7</td>
<td>Mastery Quiz in Prep-U #5 opens (closes on Nov 12th at 11:30pm) Cardiovascular Dysfunction II</td>
<td>Dr. Schumacher</td>
</tr>
<tr>
<td>11</td>
<td>Nov 9</td>
<td>Respiratory Dysfunction I</td>
<td>Dr. Schumacher</td>
</tr>
<tr>
<td>12</td>
<td>Nov 14</td>
<td>Mastery Quiz in Prep-U #6 opens (closes on Nov 19th at 11:30pm) Respiratory Dysfunction II</td>
<td>Dr. Schumacher</td>
</tr>
<tr>
<td>12</td>
<td>Nov 16</td>
<td>Exam 4</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Nov 21</td>
<td>Mastery Quiz in Prep-U #7 opens (closes on Nov 26th at 11:30 pm) Genitourinary and Reproductive Dysfunction I</td>
<td>Dr. Hughes</td>
</tr>
<tr>
<td>13</td>
<td>Nov 23</td>
<td>Genitourinary and Reproductive Dysfunction II</td>
<td>Dr. Hughes</td>
</tr>
<tr>
<td>14</td>
<td>Nov 28</td>
<td>Mastery Quiz in Prep-U #8 opens (closes on Dec 3rd at 11:30 pm) Neurologic Dysfunction</td>
<td>Dr. Hughes</td>
</tr>
<tr>
<td>14</td>
<td>Nov 30</td>
<td>Neurological Dysfunction</td>
<td>Dr. Hughes</td>
</tr>
<tr>
<td>15</td>
<td>Dec 5</td>
<td>Musculoskeletal Dysfunction</td>
<td>Dr. Schumacher</td>
</tr>
<tr>
<td>15</td>
<td>Dec 7</td>
<td>Musculoskeletal Dysfunction</td>
<td>Dr. Schumacher</td>
</tr>
</tbody>
</table>

Finals Week:
NUR 301 Patho final is on December 16, 10 am to 12 noon