



## **NURS 5302.01 Advanced Pathophysiology Fall 2019**

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### **COURSE INFORMATION**

#### **Materials – Textbooks, Readings, Supplementary Readings**

##### **Textbook(s) Required**

McCance, K., & Huether, S. (2018). *Pathophysiology: The Biologic Basis for disease in adults and children* (8<sup>th</sup> Ed.). St. Louis: Wlsevier.

Dains, J. Baumann, & Scheibel, P. (2015). *Advanced health assessment & clinical diagnosis in primary care* (5<sup>th</sup> Ed.). St. Louis: Mosby.

##### **Optional**

Collins, R. (2017). *Algorithmic diagnosis of symptoms and signs* (4<sup>th</sup> Ed.). Philadelphia: Lippincott, Williams & Wilkins.

#### **Course Description (3 semester credit hours)**

This course focuses on pathophysiology and disruptions in normal body functioning for individuals across the lifespan. In depth theoretical and clinical principles of diseases encountered in primary care setting as well as health disparities resulting from genetic, environmental, and stress related causes are included. Assessment findings, diagnostic testing and interventions specific to selected health problems are explored to begin development of critical thinking skills for pathophysiologic causes and treatments of given disease processes.

### **Student Learning Outcomes**

Upon completion of the course, the student will have been given the opportunity to:

1. Apply principles related to normal anatomy and physiology of human body systems to pathophysiologic processes of common disease processes.
2. Differentiate among normal and abnormal variants of pathophysiologic and physical findings based on lifespan changes and normal anatomy and physiology.
3. Synthesize pathophysiologic knowledge with current aspects of care relating to commonly occurring diseases.
4. Incorporate current and emerging genetic/genomic evidence in advanced nursing care management plans for individuals, families, and communities.
5. Discuss clinical manifestations of selected disease processes and health related problems across the life span.
6. Identify appropriate pharmacological and non-pharmacological treatment and management of specific health alterations.
7. Develop differential medical diagnoses based on analysis of pathophysiological findings.
8. Identify the role of the advanced practice nurse in the development of an evidence-based treatment plan for specific pathophysiological processes.

## **COURSE REQUIREMENTS**

### **Instructional / Methods / Activities Assessments**

Teaching and learning methods will include lecture, presentations, group discussion, use of audiovisuals, on-line course information, handouts, reading and written assignments, and case studies.

### **Student Responsibilities**

**Online Etiquette:** This class will be conducted entirely online. Please use the following a guide to your online behavior.

- Make a personal commitment to learning about, understanding, and supporting your peers.
- Assume the best of others in the class and expect the best from them.
- Recognize and value the experiences, abilities, and knowledge each person brings to class. Value the diversity of the class.

- Participate actively in the discussions, having completed the readings and thought about the issues.
- Pay close attention to what your classmates write in their online comments. Ask clarifying questions, when appropriate. These questions are meant to probe and shed new light, not to minimize or devalue comments.
- Think through and re-read your comments before you post them.
- Never make derogatory comments toward another person in the class.
- Do not make sexist, racist, homophobic, or victim-blaming comments at all.
- Disagree with ideas, but do not make personal attacks.
- Be open to be challenged or confronted on your ideas or prejudices.
- Challenge others with the intent of facilitating growth. Do not demean or embarrass others.
- Encourage others to develop and share their ideas.
- Be willing to change.

## **GRADING**

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 83%-89%

C = 75%-82%

D = 60%-74%

F = 59% or Below

<b>Evaluation Methods</b>	
Quizzes (10)	10%
Mid-term Exam	20%
Final Exam	25%
Case Study Presentation	20%
Scholarly Paper	25%

## Assessments

**Quizzes:** Quizzes will be an online, timed assessment of the current assigned reading materials. Quizzes not completed during the assigned timeframe will not have make-ups and the student will receive a zero for the quiz.

**Exams:** Exams will be an online, timed assessment of the units specified in the course schedule. A student who is unable to take the scheduled exam must notify the instructor prior to the start of the exam to determine whether a make-up is available.

**Case Study Presentation:** Each student will prepare a 20-25 minute case study presentation on a specific disease process being covered during the week the individual case study is assigned. This case study will be placed into the online course for asynchronous access by the class. Presentations will be evaluated by both the class members and the instructor.

Presentations should include:

- Comprehensive description of the chief complaint with presenting signs and symptoms.
- Pathophysiology and clinical manifestations related to the disease process identified and how it presents across the lifespan.
- Laboratory and diagnostic studies used in identification and diagnosis of the problem.
- Management and treatment to include pharmacological and non-pharmacological treatments.
- Cultural and socio-cultural considerations.
- Prognosis and expected health outcomes.

**Scholarly Paper:** Students will be expected to write a scholarly paper approximately 5-7 pages in length (not including title page and references). The paper should be well organized using specific headings, proper grammar, syntax and terminology. Correct APA format is required. A list of acceptable topics is found at the end of the syllabus. The paper should include:

- Brief introduction of the disease process and the significance of the problem as related across the lifespan.
- Pathophysiology of the disease process and history and physical findings related to the disease.
- Incidence and prevalence of disease.
- Review of current evidence-based treatment guidelines related to research findings specific to the disease process. Student must use at least five (5) peer-reviewed research articles from journal sources that

are less than five years old. Web-based sources are not recommended.

- Role of the APN and the use of pharmacological and non-pharmacological treatments specific to the patient's condition.
- Cultural and socio-cultural considerations.
- Prognosis and long-term care considerations.

## TECHNOLOGY REQUIREMENTS

### Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

### Desktop Support

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

### Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or <b>point</b> release of that major version) and the previous major version of iOS (the latest minor or <b>point</b> release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version.  Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
  - 512 MB of RAM, 1 GB or more preferred
  - Broadband connection required courses are heavily video intensive
  - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

- You must have a:
  - Sound card, which is usually integrated into your desktop or laptop computer
  - Speakers or headphones.
  - \*For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: [JAVA web site http://www.java.com/en/download/manual.jsp](http://www.java.com/en/download/manual.jsp)
- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.

JavaScript is enabled.

Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  - [Adobe Reader https://get.adobe.com/reader/](https://get.adobe.com/reader/)
  - [Adobe Flash Player \(version 17 or later\) https://get.adobe.com/flashplayer/](https://get.adobe.com/flashplayer/)
  - [Adobe Shockwave Player https://get.adobe.com/shockwave/](https://get.adobe.com/shockwave/)
  - [Apple Quick Time http://www.apple.com/quicktime/download/](http://www.apple.com/quicktime/download/)
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

## ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

**Note:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

## COMMUNICATION AND SUPPORT

### Brightspace Support

#### Need Help?

#### Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

#### Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words “[click here](#)” to submit an issue via email.



#### System Maintenance


Please note that on the 4th Sunday of each month there will be System Maintenance which means the system will not be available 12 pm-6 am CST.

## FREE MOBILE APPS

The Courses apps for phones have been adapted to support the tasks students can easily complete on a smaller device. Due to the smaller screen size course content is not presented.



The Courses app is free of charge. The mobile Courses Apps are designed and adapted for different devices.

	<b>App Title:</b>	<b>iPhone</b> – Pearson LearningStudio Courses for iPhone <b>Android</b> – LearningStudio Courses - Phone
	<b>Operating System:</b>	<b>iPhone</b> - OS 6 and above <b>Android</b> – Jelly Bean, Kitkat, and Lollipop OS
	<b>iPhone App URL:</b>	<a href="https://itunes.apple.com/us/app/pearson-learningstudio-courses/id977280011?mt=8">https://itunes.apple.com/us/app/pearson-learningstudio-courses/id977280011?mt=8</a>
	<b>Android App URL:</b>	<a href="https://play.google.com/store/apps/details?id=com.pearson.lphone">https://play.google.com/store/apps/details?id=com.pearson.lphone</a>

Once downloaded, search for Texas A&M University-Commerce, and it should appear on the list. Then you will need to sign into the myLeo Mobile portal.

The Courses App for Android and iPhone contain the following feature set:

- View titles/code/Instructor of all Courses enrolled in online
- View and respond to all discussions in individual Courses
- View Instructor Announcements in individual Courses
- View Graded items, Grades and comments in individual Courses
- Grade to Date
- View Events (assignments) and Calendar in individual Courses
- View Activity Feed for all courses
- View course filters on activities
- View link to Privacy Policy
- Ability to Sign out
- Send Feedback

## COMMUNICATION AND SUPPORT

Communication between faculty and students is important and taken seriously. To that end, faculty are committed to student success in this course. Students are responsible for making appointments and asking questions to clarify any questions or procedures. Preferred communication methods are through individualized faculty office hours, email, or office phone and occur during regular business hours. If a phone call is not answered, please leave a message and send an e-mail using the direct e-

mail link on the course home page. You will be treated with collegial respect and you are expected to communicate likewise in a professional manner.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **CLASS**

1. Exam dates are listed in each course syllabus, and the student is expected to take the exams as scheduled.
2. As an adult learner and responsible professional, the student is responsible for reading and completing assignments prior to class and for being prepared to participate in discussions over the assigned material. It should not be expected that all material will be covered in class. Students are expected to come to class prepared.
3. Assignments must be handed in on time. Assignments submitted late without prior arrangement with the classroom instructor will receive a zero.

### **Paper submissions**

All documents submitted online are to be in .docx, .rtf or .pdf format. No other formats will be accepted (JPEG, GIF, etc.). Assignments need to be submitted in a maximum of one document per assignment. Failure to follow these guidelines will result in a grade of "0" on the assignment.

### **Late Submissions**

It is expected that students will submit all assignments on time. If an extension is needed, it should be requested before the due date and may or may not be approved at the discretion of the course coordinator. Unexcused late assignments will be penalized 10% per day for each of the first two days overdue; on the 3rd day, the grade will be assigned as 0%. Communication on these matters is the student's responsibility.

### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

## University Specific Procedures

### Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: [Netiquette http://www.albion.com/netiquette/corerules.html](http://www.albion.com/netiquette/corerules.html)

### TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage and [Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

### Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

## **ADA Statement**

### **Students with Disabilities**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

*Office of Student Disability Resources and Services*

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

### **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal

Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

## COURSE OUTLINE / CALENDAR

Week	Date	Content	Readings
1	8/29/19	Clinical Reasoning Cellular biology, Altered cellular and tissue biology, Cellular environment	McCance: Chap 1,-3 Dains: Chap 1
2	9/5/19	Genes, Gene-Environment Interaction, Epigenetics <b>Quiz 1 due by 9/10/19 at 11:00 PM</b>	McCance: Chap 4-6
3	9/12/19	Mechanisms of Self- Defense Immunity Infection Stress and Disease <b>Quiz 2 due by 9/17/19 at 11:00 PM Notify faculty of topic for Case Study</b>	McCance: Chap 7- 11
4	9/19/19	Cellular Proliferation: Cancer Laboratory Interpretation and Diagnostic Imaging <b>Quiz 3 due by 9/24/19 at 11:00 PM</b>	McCance: Chap 12-14 Dains: Chap 6, 40, 41
5	9/26/19	Pathophysiologic Alterations of the neurologic system <b>Case Study Presentation due 10/1/19 at 11:00 PM</b>	McCance: Chap 15-20 Dains, Chap 4, 9, 19
6	10/3/19	Pathophysiologic Alterations of the Endocrine System	McCance: Chap 21-23 Dains:

		<b>Quiz 4 due by 10/8/19 at 11:00 PM</b>	
7	<b>10/10/19</b>	<b>Mid Term Exam</b>	
8	10/17/19	Pathophysiologic Alterations of the Reproductive System <b>Quiz 5 due by 10/15/19 at 11:00 PM</b>	McCance: Chap 24-27. Dains: Chap 5, 27, 36, & 37
9	10/24/19	Pathophysiologic Alterations of the Hematologic System <b>Quiz 6 due by 10/22/19 at 11:00 PM</b>	McCance: Chap 28-31.
10	10/31/19	Pathophysiologic Alterations of the Cardiovascular and lymphatic systems <b>Quiz 7 due by 10/29/19 at 11:00 PM</b>	McCance: Chap 32-34 Dains: Chap 8, 26, 33 JNC Guidelines
11	11/7/19	Pathophysiologic Alterations of the Pulmonary System <b>Quiz 8 due by 11/5/19 at 11:00 PM</b>	McCance: Chap 35-37 Dains: 11, 14, 25
12	11/14/19	Pathophysiologic Alterations of the Renal and Urologic Systems <b>Scholarly Paper Due 11/19/19 at 11:00 PM</b>	McCance: Chap 38-40. Dains: Chap 18, 34, 35.
13	11/21/19	Pathophysiologic Alterations of the Digestive System <b>Happy Thanksgiving!</b>	McCance: Chap 41-43 Dains: Chap 3, 10, 12, 20, 29, 39.
14	11/28/19	Pathophysiologic Alterations of the Musculoskeletal System and the Integumentary System	McCance: Chap 44-48. Dains: Chap 22, 23, 24, 28.

		<b>Quiz 9 due by 12/3/19 at 11:00 PM</b>	
15	12/5/19	Multiple Interacting Systems Evidence-Based Practice Use of Algorithms <b>Quiz 10 due by 12/10/19 at 11:00 PM</b>	McCance: Chap 49 & 50.
16	<b>12/12/19</b>	<b>Final Exam</b>	



### Case Study Presentation: Grading Criteria

Criteria	Possible Points	Score	Comments
Introduction of chief complaint and disease process with the associated signs and symptoms	10		
Five (5) potential differential diagnoses, in order of priority, related to the chief complaint	20		
Pathophysiology and clinical manifestations of the disease process across the lifespan	30		
Laboratory and diagnostic studies used in the identification and diagnosis of the problem	10		
Management and treatment, including pharmacological and non-pharmacological treatments, cultural and socio-cultural considerations, prognosis and expected health outcomes.	10		
Teaching and anticipatory guidance	5		
PowerPointPresentation:			
a. Organization, grammar & terminology,	5		
b. Proper APA citation of sources and reference page	5		
c. Professional presentation	5		
d. Within time limitation (15-20 min)			
<b>TOTAL</b>			

**Scholarly Paper Disease topics include the following**

1. Asthma
2. Cerebrovascular Accident (CVA)
3. Uveitis
4. Syncope
5. Tachycardia
6. Cellulitis
7. Herpes Zoster
8. Steven-Johnson Syndrome
9. Urticaria
10. Acute Otitis Media
11. Coronary Artery Disease
12. Acute Myocardial Infarction (MI)
13. Heart Failure
14. Hypertension
15. Hyperthyroidism
16. Deep Vein Thrombosis (DVT)
17. Diabetes Mellitus Type 2
18. Metabolic Syndrome
19. Non-Alcoholic Steatohepatitis
20. diverticulosis
21. Gastroesophageal Reflux (GERD)
22. Barrett's Esophagus
23. Inflammatory Bowel Disease (IBS)
24. Physiological Jaundice in Infants
25. Pelvic Inflammatory Disease
26. Hematuria
27. Nephrolithiasis
28. Lyme Disease
29. Rheumatoid Arthritis
30. Rocky Mountain Spotted Fever

### Scholarly Paper: Grading Criteria

	<b>Points Possible</b>	<b>Score</b>	<b>Comments</b>
Introduction and description of disease process.	5		
Significance of the problem across the lifespan	10		
Pathophysiology of the disease and related history and physical findings specific to the disease process.	20		
Statistical information on the incidence and prevalence of the disease.	10		
Literature review related to current research and evidence-based treatments specific to the disease process.	10		
Literature review includes 5 research based, peer-reviewed journal articles no older than 5 years	5		
APN role in management and treatment to include pharmacological and non-pharmacological treatments	15		
Cultural and socio-cultural considerations as they	10		

relate to patients prognosis and long-term outcomes.			
Organization Correct APA format Correct terminology, grammar	5 5 5		
<b>TOTAL</b>			