

**Request for Graduate Course Addition**

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: School of Medicine

Dept/Division: PA Program

Alpha Designator/Number: PAS 500

☒ Graded ☐ CR/NC

Contact Person: Ginger Boles, MS PA-C

Phone: 304-629-1341

**NEW COURSE DATA:**

New Course Title: Foundations of Medicine

Alpha Designator/Number:

P A S 5 0 0

Title Abbreviation:

F o u n d a t i o n s o f M e d i c i n e

(Limit of 25 characters and spaces)

Course Catalog Description:  
(Limit of 30 words)

This course develops an understanding of normal physiology, genetics, microbiology, pathology and pathophysiologic concepts of diseases per organ system. Knowledge will be applied in subsequent semesters

Co-requisite(s): PAS 520, 530, 550

First Term to be Offered: Spring 2021

Prerequisite(s): Admission to PA program

Credit Hours: Seven

Course(s) being deleted in place of this addition (must submit course deletion form): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head



Date

8/20/19

Registrar

 510912

Date

8/21/19

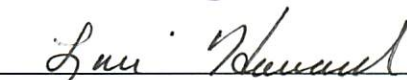
College Curriculum Chair



Date

8/26/19

Graduate Council Chair



Date

10/1/19

## Request for Graduate Course Addition - Page 2

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College: School of Medicine

Department/Division: PA Program

Alpha Designator/Number: PAS 500

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Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

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1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Course will be taught by Faculty in the PA program and/ or School of Medicine

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

N/A

Course duplication was addressed in the Addition of Degree application

3. REQUIRED COURSE: If this course will be required by another department(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

N/A

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

N/A

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable.

Course will be taught by faculty in the PA program and/or School of Medicine

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See attached

## **Request for Graduate Course Addition - Page 3**

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### **7. COURSE OUTLINE (May be submitted as a separate document)**

See attached

### **8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)**

See Attached

### **9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)**

See Attached

## **Request for Graduate Course Addition - Page 4**

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

See Attached

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

N/A

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

See attached



## Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Course Number and Title:

Catalog Description:

Prerequisites:

First Term Offered:

Credit Hours:

Department: Physician Assistant Program

Course Number and Title: PAS 500

Catalog Description: This course develops an understanding of normal physiology, genetics, microbiology, pathology, and pathophysiologic concepts of diseases per organ system. Knowledge will be applied in subsequent semesters.

First Term Offered: Spring 2021

Credit Hours: Seven



PHYSICIAN ASSISTANT PROGRAM

## **MUPA Program Foundations of Medicine - PAS 500 Course Syllabus**

### **Course Description**

This course develops an understanding of normal physiology, genetics, microbiology, pathology and pathophysiologic concepts of diseases per organ system. Knowledge will be applied in subsequent semesters.

### **Credits**

Seven (7) credit hours

### **Prerequisites**

Admission to the Marshall University Physician Assistant Program

### **Course Goals**

- Develop a solid understanding of the normal function of the human body at the molecular, cellular, tissue, organ, and organ system levels, recognizing individual variations and abnormalities effecting these functions.
- Understand how the characteristics of pathogen create illness within the human body, and the role of the immune system in response to those pathogens.
- Understand the pathophysiologic basis for selected diseases and disorders of all organ systems in the body, including genetic causes.

### **Term/Year**

Spring Semester 2021

### **Class Meeting Days/Times**

Monday, Wednesday, and Friday

9:00 am – 12:00 pm

Tuesday and Thursday

8:00 am – 12:00 pm

### **Location**

TBA

### **Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/>).

## Course Director

Jaclyn Kiser, MS PA-C

Office TBA

Office hours TBA

Office phone (304) 691-1854

Email: [kiserj@marshall.edu](mailto:kiserj@marshall.edu)

## Course Instructors

TBA

## Required Texts and Materials

Chin-Hong, P., Joyce, E., Levinson, W., Nussbaum, J., & Schwartz, B. (2018). *Review of medical microbiology & immunology: A guide to clinical infectious diseases, 15<sup>th</sup> ed.* New York, NY: McGraw-Hill.

Hammer, G.D., & McPhee, S.J. (2019). *Pathophysiology of disease: An introduction to clinical medicine, 8<sup>th</sup> ed.* New York, NY: McGraw-Hill.

Janson, L.W., & Tischler, M.E. (2012). *The big picture: Medical biochemistry.* New York, NY: McGraw-Hill.

McInnes, R.R., Nussbaum, & Willard, H.F. (2016). *Genetics in medicine, 8<sup>th</sup> ed.* Philadelphia, PA: Elsevier.

## Recommended/Optional Texts and Materials

Halsey, C.R., & Kibble, J.D. (2014). *Medical physiology: The big picture.* New York, NY: McGraw-Hill.

\*The Marshall University PA program has an online database of textbooks available to the students. The website for the online database is <http://accessmedicine.mhmedical.com>. Most textbooks used throughout the program can be found on the Access Medicine website.

## Attire

Per Marshall University Physician Assistant Program Policy.

## Attendance/Participation Policy

Attendance is vital to understanding course content. It is mandatory for all lectures/clinical labs, and is a reflection of your commitment, dedication, and work ethic. Requests for excused absences must be submitted to the course director via email as soon as the circumstance arises. Failure to attend may affect your grade or require discussion with the course director.

## Course Requirements

- Students are expected to attend and be on time for all scheduled lectures and learning activities.
- Students are expected to participate in all activities.
- Students are expected to be prepared for each lecture/learning activity by reading all assignments prior to the scheduled lecture/activity.
- Students are expected to clean up work area prior to leaving the classroom or laboratory.
- Completion of course & faculty evaluations. (see policy statement at the end of this syllabus)

## Methodologies of Teaching and Student Assessment

Student attainment of expected learning outcomes will be practiced and achieved using various

instructional and learning methods including; lecture, in-class discussion, independent learning, and/or video/audio/graphic illustrations. This is subject to variation throughout the course based upon instructor preferences and the needs of the students. Student achievement of learning outcomes will be assessed using; quizzes, examinations, and a cumulative final examination.

\*The final grade will be determined by earned points/total points.\*

| Component              | % of Final Grade |
|------------------------|------------------|
| Examinations           | 50%              |
| Final Examination      | 20%              |
| Quizzes                | 20%              |
| Assignments            | 5%               |
| Professionalism Rubric | 5%               |

Per the MUPA program policy, the following grading scale applies:

- A – 89.5 - 100%
- B – 79.5 - 89.4%
- C – 69.5 - 79.4%
- F – < 69.4 %

### Student Learning Outcomes, Competencies, and Instructional Objectives

| Student Learning Outcomes  | ARC-PA Standards/<br>Competencies         | Instructional Objectives   |
|--|---|--|
| Upon successful completion of this course, PA students will be able to:                        |   | Upon successful completion of this course, PA students will be able to:  |
| Describe physiological processes at the biochemical, cell, organ, system, and organism levels. | B1.02, B1.03, B1.04, B2.02 (a, b, e) (MK) | <ul style="list-style-type: none"> <li>• Discuss the normal function of the building blocks of life (e.g. amino acids, proteins, enzymes, carbohydrates, lipids, etc.)</li> <li>• Describe the function of major cell organelles, and the cell membrane.</li> <li>• Describe the functions of ligands and receptors.</li> <li>• Explain the various pathways of cellular reactions and metabolism.</li> <li>• Discuss cell signaling, chemical messengers, and receptor systems.</li> <li>• Differentiate cell type per organ system, and how they create tissues and organs.</li> <li>• Describe the functions of the organ systems, including the specific functions of the individual organs, tissues, and cells that make up these systems.</li> </ul> |

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to:  | <b>ARC-PA Standards/ Competencies</b>      | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|--|--|---|
|  |  | <ul style="list-style-type: none"> <li>• Explain how the functions of each organ system are regulated and how homeostasis is maintained.</li> <li>• Recognize individual variations and abnormal anatomic and physiologic functions of the human body and how they affect function.</li> </ul>  |
| Discuss principles of microbiology with regard to diseases caused by viruses, fungi, mycoses, parasites, and bacteria and how the human body utilizes the immune system for protection from them | B1.02, B1.03, B1.04, B2.02 (e) (MK)        | <ul style="list-style-type: none"> <li>• Discuss immunology including innate and adaptive and its significance in protection.</li> <li>• Describe the types of immune system cells, their origins, and their major roles.</li> <li>• Recall classifications of bacteria.</li> <li>• Describe the mechanisms by which viruses, fungi, mycoses, parasites, and bacteria attack cells and cause illness and disease.</li> <li>• Detail the pathophysiology of selected immune disorders.</li> <li>• Contrast primary immunodeficiency to compromised immunity.</li> <li>• Recognize diseases and disorders with immunologic (innate and adaptive) underlying cause.</li> </ul> |
| Describe the pathophysiology of genetic disorders.   | B1.02, B1.03, B1.04, B2.02 (c), B2.03 (MK) | <ul style="list-style-type: none"> <li>• Relate basic concepts of genetics to the development of genetic disorders, noting at what point variants arise most commonly, why, and the manifestations.</li> <li>• Contrast Mendelian genetics with non-Mendelian genetics.</li> <li>• Predict the inheritance of a disorder based on established genetic</li> </ul>  |

### Course Content and Assignments

| Week | Topics   | Activity/Assignment   |
|------|--|---|
| 1    | The Basic Molecules of Life and Functional Biochemistry                                    | The Big Picture: Medical Biochemistry – Sections I & II<br><b>Quiz # 1</b>                      |
| 2    | Metabolism and Applied Biochemistry per Organ System                                       | The Big Picture: Medical Biochemistry – Section III<br><b>Quiz # 2</b><br><b>Exam #1</b>        |
| 3    | The Chromosomal Basis of Heredity; the Human Genome; and Gene Structure and Function       | Genetics in Medicine – Chapters 1-3<br><b>Quiz # 3</b>  |
| 4    | Patterns of Inheritance; The Molecular, Biochemical, and Cellular Basis of Genetic Disease | Genetics in Medicine – Chapters 7 & 12<br><b>Quiz # 4</b>                                       |
| 5    | Cancer Genetics and Genomics   | Genetics in Medicine – Chapter 16<br><b>Quiz # 5</b><br><b>Exam # 2</b>                         |
| 6    | Overview of Immunity   | Medical Microbiology and Immunology – Part VII<br><b>Quiz # 6</b>                               |
| 7    | Basic Bacteriology and Virology  | Medical Microbiology and Immunology – Parts I & III<br><b>Quiz # 7</b>                          |
| 8    | Mycology; Ectoparasites; Parasitology  | Medical Microbiology and Immunology – Parts V, VI, & VIII<br><b>Quiz # 8</b><br><b>Exam # 3</b> |
| 9    | Pathophysiology: Neoplasia; Blood Disorders  | Pathophysiology of Disease – Chapters 5 & 6<br><b>Quiz # 9</b>                                  |
| 10   | Pathophysiology: Nervous System Disorders; Diseases of the Skin; Pulmonary Disease         | Pathophysiology of disease – Chapters 7, 8, & 9<br><b>Quiz # 10</b>                             |



| Week | Topics   | Activity/Assignment  |
|------|--|--|
| 11   | Pathophysiology: Cardiovascular Disorders  | Pathophysiology of Disease – Chapters 10 & 11<br><b>Quiz # 11</b>              |
| 12   | Pathophysiology: Endocrine Disorders   | Pathophysiology of Disease – Chapters 15, 17, 18, 19, & 20<br><b>Quiz # 12</b> |
| 13   | Pathophysiology: Gastrointestinal; Liver; and Renal Disease                      | Pathophysiology of Disease – Chapters 13, 14, & 16<br><b>Quiz # 13</b>         |
| 14   | Pathophysiology: Male/Female Reproductive Tract; Inflammatory Rheumatic Diseases | Pathophysiology of Disease – Chapters 22, 23, & 24<br><b>Quiz # 14</b>         |
| 15   | Review for finals  | <b>Quiz # 15</b><br><b>Exan # 4</b>  |
| 16   | <b>Finals</b>  | <b>Final Exam</b>  |
| 17   | <b>Remediation</b>   |  |

### ARC-PA Standards that Pertain to this Course

The Accreditation Review Commission on Education for the Physician Assistant is the accrediting agency that protects the interests of the public and physician assistant profession by defining the standards for physician assistant education and evaluating physician assistant educational programs within the territorial United States to ensure their compliance with those standards. The ARC-PA Standards, 4th Ed. ARC-PA Standards (<http://www.arc-pa.org/accreditation/standards-of-accreditation/>) that are relevant to this course are listed below:

- B1.01 – The curriculum must be consistent with the mission and goals of the program.
- B1.02 – The curriculum must include core knowledge about the established and evolving biomedical and clinical sciences and the application of this knowledge to patient care.
- B1.03 – The curriculum must be of sufficient breadth and depth to prepare the student for the clinical practice of medicine.
- B1.04 – The curriculum design must reflect sequencing that enables students to develop the competencies necessary for current and evolving clinical practice.
- B2.02 (a, b, c, e) – The program must include instruction in the following areas of applied medical sciences and their application in clinical practice:
  - (a) anatomy,
  - (b) physiology,
  - (c) pathophysiology,
  - (d) pharmacology and pharacotherapeutics,
  - (e) the genetic and molecular mechanisms of health and disease.
- B2.03 – The curriculum must include instruction in clinical medicine covering all organ systems.

### MUPA Competencies Relevant to this Course

#### Medical Knowledge (MK)

Graduates will demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care. Graduates will apply the ability to use

evidence based medicine, and be able to synthesize areas of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention to care for patients across the life span in culturally diverse populations and rural areas.

## University Policies

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/policies/). (URL: <http://www.marshall.edu/academic-affairs/policies/>)

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Marshall University E-Mail Accounts and Technology Assistance

You must have and use your MU email account. Your personal email accounts will not be used for official communication with Marshall University programs and personnel. You may redirect your MU email to your own personal email account, but you must sign in to your MU account to do that. Marshall University uses Office 365 email. For more information, visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: <https://www.marshall.edu/it/office365/>).

For computer and browser requirements, see “Get Connected” and “Internet Browser” at [Student Resources: First Steps](http://www.marshall.edu/muonline/student-resources/). See also [IT: Recommended Hardware](http://www.marshall.edu/it/recommendations/) (URLs: <http://www.marshall.edu/muonline/student-resources/> and <http://www.marshall.edu/it/recommendations/>). To check your browsers, use the [Blackboard Browser Checker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker) and ensure that you set permissions properly and have all the necessary plug-ins. (URL: [https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support/BrowserChecker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker))

- Students must be able to use Marshall Email, as well as the following tools in Blackboard: course messages, assignments, discussion board forums, tests, blogs, journals, wikis, and groups. Links to Blackboard Help and tutorials are available on the Start Here page and on the Tech Support tab in Blackboard. [Adobe Acrobat Reader](https://get.adobe.com/reader/) may be needed to read some files. This plug-in is available free. (URL: <https://get.adobe.com/reader/>) See the Tech Support tab in Blackboard for additional information and links.
- Students may be required to submit assignments as Microsoft Word documents (.docx), using the most recent Microsoft Office suite. Office 365 is available at no extra charge to students enrolled at MU. For information visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: <https://www.marshall.edu/it/office365/>).
- See the Tech Support tab in Blackboard for additional information on browsers, technology, and apps.

If you have technical problems, please contact one or more of the following:

- [Blackboard Support Center](http://marshall.edusupportcenter.com) (URL: <http://marshall.edusupportcenter.com> )



- [Marshall Information Technology \(IT\) Service Desk \(Help Desk\)](http://www.marshall.edu/it/departments/it-service-desk/) (URL: <http://www.marshall.edu/it/departments/it-service-desk/>)  
Huntington: (304) 696-3200
- [Email the IT Service Desk \(itservicedesk@marshall.edu\)](mailto:itservicedesk@marshall.edu)

### Technology and Technical Skill Requirement

- Students must be proficient in the use of computers, the Internet, browsers, Microsoft Office Word, and other common applications.

### Course & Faculty Evaluations

Policy Statement Regarding Student Compliance with Course Evaluations: The Physician Assistant Program at Marshall University has a process to assess all aspects of the program. It is important to gain information from our PA students. By implementing a systematic method of collecting student feedback, appropriate PA program faculty, the Program Director, the Curriculum Committee and the Self-Assessment Committee are able to carefully review and respond to student course ratings to identify strengths and weaknesses and promote positive curricular change. Therefore, students are required to complete evaluations of all courses and rotations and their associated faculty/ preceptors. Students who do not to complete course/rotation evaluations within the established timeframe will receive one warning of the penalties for non-compliance. If the student still has not completed the evaluations within 48 hours of the warning, they will have written warning submitted to the Student Progress Committee for possible inclusion as part of their academic record. The PA Program also recognizes that repeated noncompliance is an issue of professional conduct. If noncompliance occurs in subsequent courses, the student will be required to meet with the Student Progress Committee.

### Modifications in Course Syllabus Disclaimer

Every attempt has been made to provide a complete syllabus that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs and experiences of the students.

## Bibliography

Clavel, M.-A., Cote, N., Krapf, L., Nguyen, A., Pibarot, P., & Ternacle, J. (2019). Chronic kidney disease and the pathophysiology of valvular heart disease. *The Canadian journal of cardiology*. Retrieved from <https://doi.org/10.1016/j.cjca.2019.05.028>

Conte, J.V., & Kemp, C.D. (2011). The pathophysiology of heart failure. *Cardiovascular pathology*, 21(5), 365-371. doi:10.1016/j.carpath.2011.11.007

Feuk, L., Carson, A.R., & Scherer, S.W. (2006). Structural variation in the human genome. *Nat. Rev. Genet.*, 7(2), 85-97. doi:10.1038/nrg1767

Haley, C.S., & Tenesa, A. (2013). The heritability of human disease: Estimation, uses and abuses. *Nat. Rev. Genet.*, 14(2), 138-149. doi:10.1038/nrg3377

Heeyeon, C. (2015). Complement regulation: physiology and disease relevance. *Korean J. Pediatr.*, 58(7), 239-244. doi:10.3345/kjp.2015.58.7.239

Kaur, P., & Moore, D.S. (2017). The heritability fallacy. *Wiley inter. rev. cogn. sci.*, 8, 1-2. doi:10/1002/wcs.1400

Kaur, P., & Peterson, E. (2018). Antibiotic resistance mechanisms in bacteria: Relationships between resistance determinants of antibiotic producers, environmental bacteria, and clinical pathogens. *Front microbiol.* doi: 10.3389/fmicb.2018.02928

Merle, N.S., Church, S.E., Fremeaux-Bacchi, V., & Roumenina, L.T. (2015). Complement system part I – molecular mechanisms of activation and regulation. *Front. Immunol.*, 6, 262. doi:10.3389/fimmu.2015.00262. eCollection 2015. Review.

Merle, N.S., Noe, R., Halbwachs-Mercarelli, L., Fremeaux-Cacchi, V., & Roumenina, L.T. (2015). Complement system part II: Role in immunity. *Front. Immunol.*, 6, 257. doi:10.3389/fimmu.2015.00257. eCollection 2015. Review.

Pessin, J.E. & Saltiel, A.R. (2000). *J. Clin. Invest.*, 106(2), 165-169. doi:10.1172/JCI10582

Reimer, L.G., & Carroll, K.C. (1998). Role of the microbiology laboratory in the diagnosis of lower respiratory tract infections. doi:10.1086/514583

Staessen, J.A., Wang, J., Bianchi, G., & Birkenhager, W. (2003). Essential hypertension. *The Lancet*, 361(9369), 1629-1641. doi:10.1016/S0140-6736(03)13302-8

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College: School of Medicine

Dept/Division: PA Program

Alpha Designator/Number: PAS 520

☒ Graded ☐ CR/NC

Contact Person: Ginger Boles, MS PA-C

Phone: 304-629-1341

**NEW COURSE DATA:**

New Course Title: Gross Anatomy for the PA

Alpha Designator/Number:

P A S 5 2 0

Title Abbreviation:

G r o s s A n a t o m y f o r t h e P A

(Limit of 25 characters and spaces)

Course Catalog Description:  
(Limit of 30 words)

This course encompasses a comprehensive approach to the study of gross anatomy while incorporating appropriate clinical application to basic organization, structure, sectional, and surface anatomy.

Co-requisite(s): PAS 510, 530, 550

First Term to be Offered: Spring 2021

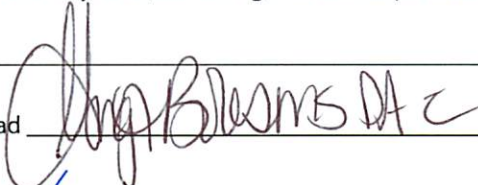
Prerequisite(s): Admission to PA program

Credit Hours: Four

Course(s) being deleted in place of this addition (must submit course deletion form): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

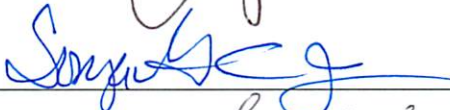
Dept. Chair/Division Head



Date

8/20/19

Registrar



510912

Date

8/21/19

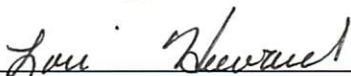
College Curriculum Chair



Date

8/26/19

Graduate Council Chair



Date

10/1/19

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College: School of Medicine

Department/Division: PA Program

Alpha Designator/Number: PAS 520

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1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Course will be taught by Faculty in the PA program and/ or School of Medicine

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

N/A

Course duplication was addressed in the Addition of Degree application

3. REQUIRED COURSE: If this course will be required by another department(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

N/A

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

N/A

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable.

Course will be taught by faculty in the PA program and/or School of Medicine

6. COURSE OBJECTIVES: (May be submitted as a separate document)

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**7. COURSE OUTLINE (May be submitted as a separate document)**

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**8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)**

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**9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)**

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### **10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)**

See Attached

### **11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE**

N/A

### **12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)**

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Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Course Number and Title:

Catalog Description:

Prerequisites:

First Term Offered:

Credit Hours:

Department: Physician Assistant Program

Course Number and Title: PAS 520

Catalog Description: This course encompasses a comprehensive approach to the study of gross anatomy while incorporating appropriate clinical application to basic organization, structure, sectional and surface anatomy.

First Term Offered: Spring 2021

Credit Hours: Four



PHYSICIAN ASSISTANT PROGRAM

## **MUPA Program Gross Anatomy for the PA – PAS 520 Course Syllabus**

### **Course Description**

This course encompasses a comprehensive approach to the study of gross anatomy while incorporating appropriate clinical application to basic organization, structure, sectional, and surface anatomy.

### **Credits**

Four (4) credit hours

### **Prerequisites**

Admission to the Marshall University Physician Assistant Program

### **Course Goals**

- Understand normal anatomy and physiology of the human body and how structure relates to function.
- Understand normal versus abnormal variations in anatomy, the mechanism underlying how they occur, and how they affect their respective organ and organ system functions.
- Develop skills working in a team to solve clinical case-based problems involving all organ systems of the body.
- Adhere to professional standards of the Physician Assistant Profession and Program.

### **Term/Year**

Spring Semester 2021

### **Class Meeting Days/Times**

TBA

### **Location**

TBA

### **Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/> ).



## Course Director

TBA

## Course Instructors

TBA

## Required Texts and Materials

Albertine, K.H., Formena, K.B., & Morton, D.A. (2019). *The big picture: Gross anatomy, 2<sup>nd</sup> ed.* New York, NY: McGraw-Hill.

## Recommended/Optional Text

Agur, A.M.R., & Moore, K.L. (1995). *Essential clinical anatomy.* Baltimore, MD: Williams & Wilkins.

\*The Marshall University PA program has an online database of textbooks available to the students. The website for the online database is <http://accessmedicine.mhmedical.com>. Most textbooks used throughout the program can be found on the Access Medicine website.

## Attire

Per Marshall University Physician Assistant Program Policy.

Attire for each lab: MUPA-approved scrubs, closed-toe shoes, non-porous sneakers, lab coat and name badge

## Attendance/Participation Policy

Attendance is vital to understanding course content. It is mandatory for all lectures/clinical labs, and is a reflection of your commitment, dedication, and work ethic. Requests for excused absences must be submitted to the course director via email as soon as the circumstance arises. Failure to attend may affect your grade or require discussion with the course director.

## Course Requirements

- Students are expected to attend and be on time for all scheduled lectures and learning activities.
- Students are expected to participate in all activities.
- Students are expected to be prepared for each lecture/learning activity by reading all assignments prior to the scheduled lecture/activity.
- Students are expected to clean up work area prior to leaving the classroom or laboratory.
- Students are expected to wear appropriate personal protective equipment during lab.
- Students are required to observe standard precautions (handwashing, gloving, gowning).
- Completion of course & faculty evaluations. (see policy statement on last page of this syllabus)

## Methodologies of Teaching and Student Assessment

Student learning outcomes will be practiced and achieved using various instructional and learning methods including; lecture, in-class discussion, independent learning, and/or video/audio/graphic illustrations. In addition, this course will have a gross anatomy laboratory component where students will learn anatomy through dissection, and prosection of the human body. This is subject to variation

throughout the course based upon instructor preferences and the needs of the students. Student achievement of learning outcomes will be assessed using; quizzes, examinations, and a cumulative final examination.

\*The final grade will be determined by earned points/total points. \*

| Component              | % of Final Grade |
|------------------------|------------------|
| Examinations           | 50%              |
| Final Examination      | 20%              |
| Quizzes                | 20%              |
| Assignments            | 5%               |
| Professionalism Rubric | 5%               |

Per the MUPA program policy, the following grading scale applies:

- A – 89.5 - 100%
- B – 79.5 - 89.4%
- C – 69.5 - 79.4%
- F – < 69.4 %

### Student Learning Outcomes, Competencies, and Instructional Objectives

| Student Learning Outcomes<br>Upon successful completion of this course, PA students will be able to:  | ARC-PA Standards/<br>Competencies | Instructional Objectives<br>Upon successful completion of this course, PA students will be able to:   |
|---|-----------------------------------|---|
| Describe the structure (including three dimensional) and location of organs, blood vessels, bones, and muscles in the human body using standard anatomical and medical terminology. | B1.02<br>(MK)                     | <ul style="list-style-type: none"> <li>Describe the anatomy of any organ or structure in the body alone or as it relates to other parts of the human body.</li> <li>Describe anatomical components of a physical examination to other members of the health care team.</li> <li>Identify structures in the sagittal, coronal, and axial planes.</li> </ul>  |
| Locate and palpate important anatomical structures that are used as landmarks or are tested during a physical examination.  | B2.07(a)<br>(MK), (PC)            | <ul style="list-style-type: none"> <li>Identify the organs and their specific structures using correct anatomic terminology, commonly used as landmarks during a physical examination in all organ systems of the body.</li> <li>Identify groups of muscles and individual muscles that are frequently tested during a physical examination.</li> <li>Identify tendons/ligaments that are commonly associated with injury.</li> </ul> |

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to:                  | <b>ARC-PA Standards/ Competencies</b> | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:   |
|--|---------------------------------------|--|
| Describe the vascular system as it relates to the structures supplied throughout all of the organ systems in the human body. | B1.02(a)<br>(MK)                      | <ul style="list-style-type: none"> <li>• Differentiate the components of the circulatory system; microvasculature, microvasculature, lymphatics, etc.</li> <li>• Describe the composition and components of blood.</li> <li>• Discuss the lymphatic system and identify lymphoid tissues.</li> <li>• Identify major arteries and veins within the body, including which organs they supply or return from.</li> <li>• Describe the hepatic portal system.</li> </ul>   |
| Discuss the nervous system as it relates to structures innervated throughout all of the organ systems in the human body.     | B2.07(a)<br>(MK), (PC)                | <ul style="list-style-type: none"> <li>• Differentiate the components of the nervous system into central and peripheral.</li> <li>• Identify all of the cranial nerves and correlate them with their specific functions.</li> <li>• Describe the components of spinal nerves.</li> <li>• Identify dermatomes.</li> <li>• Describe the brachial plexus.</li> <li>• Describe the lumbar plexus.</li> <li>• Describe the sacral plexus.</li> <li>• Discuss the intrinsic and extrinsic regulation systems of the heart and differentiate sympathetic and parasympathetic innervation.</li> <li>• Identify the innervation of the foregut, midgut, and hindgut.</li> </ul> |

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to:   | <b>ARC-PA Standards/ Competencies</b> | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|---|---------------------------------------|---|
| Using anatomically correct terminology, describe the foregut, midgut, and hindgut, and pelvis, and the components of each, relating them to their specific functions. | B2.02(a)<br>(MK)                      | <ul style="list-style-type: none"> <li>• Detail the components of the foregut, their location, and associated functions.</li> <li>• Describe the components of the midgut, their location, and associated functions.</li> <li>• Discuss the components of the hindgut, their location, and associated functions.</li> <li>• Identify the organs and structures found in the anterior abdominal cavity, and the organs and structures found in the posterior abdominal cavity.</li> <li>• Describe the organs and structures found within the pelvis, their location, and associated functions.</li> </ul> |
| Using anatomically correct terminology, describe the musculoskeletal system, in components related to head, neck, upper limb, thorax, abdomen, back, and lower limb.  | B2.02(a)<br>(MK)                      | <ul style="list-style-type: none"> <li>• Describe the configuration, function, and location of the muscles and associated structures of the head and neck.</li> <li>• Describe the configuration, function, and location of the muscles and associated structures of the upper limb.</li> <li>• Describe the configuration, function, and location of the muscles and associated structures of the abdomen/back.</li> <li>• Describe the configuration, function, and location of the muscles and associated structures of the lower limb.</li> </ul>   |



### Course Content and Assignments

| Week | Topics  | Activity/Assignment  |
|------|---|--|
| 1    | Introduction to the lab<br>Terminology and Systems Intro<br><b>Unit 1</b><br>Back <ul style="list-style-type: none"> <li>• Back – (lecture)</li> <li>• Back musculature</li> <li>• Spinal Cord</li> </ul>         | Section 1, Chapter 1<br><br>Section 6, Chapter 29, 30, 31, 32 33   |
|      | <b>Unit 2</b><br>Upper Extremity <ul style="list-style-type: none"> <li>• Upper limb – (lecture)</li> </ul> shoulder/anterior chest   | <b>Exam # 1 - Back</b>   |
| 2    | Upper limb continued <ul style="list-style-type: none"> <li>• Upper arm</li> <li>• Joints of upper extremity</li> <li>• Palm</li> <li>• Forearm and Hand</li> </ul>   | As above   |
| 3    | <b>Unit 3</b><br>Lower extremity <ul style="list-style-type: none"> <li>• Leg – (lecture)</li> <li>• Proximal lower extremity</li> <li>• Gluteal Region, thigh</li> <li>• Anterior and medial thigh</li> </ul>    | <b>Exam # 2 – Upper Extremity</b><br><br>Section 7, Chapter 34, 3, 36, 37                                    |
| 4    | Leg continued <ul style="list-style-type: none"> <li>• Lower limb joints</li> <li>• Foot</li> <li>• Popliteal fossa</li> </ul>  | Section 7, Chapter 38<br><br><b>Exam #3 – Lower Extremity</b>  |
| 5    | <b>Unit 4</b><br>Head/Neck/Face <ul style="list-style-type: none"> <li>• Head/Neck/Face – (lecture)</li> <li>• Anterior and Posterior Neck</li> <li>• Lateral Neck</li> <li>• Cranial Cavity and Brain</li> </ul> | Section 4, Chapters 15, 16<br>Chapter 17, 9, 20, 21, 22  |
| 6    | Head/ Neck/ Face continued <ul style="list-style-type: none"> <li>• Orbit</li> <li>• Nasal Cavity/ Oral Cavity</li> <li>• Larynx and Deep Neck</li> </ul>   | Section 4, Chapter 18, 23, 24<br>Section 5, Chapter 25, 26, 27, 28<br><br><b>Exam # 4 - Head/ Neck/ Face</b> |

| Week | Topics   | Activity/Assignment  |
|------|--|--|
| 7    | <b>Unit 5</b><br>Thoracic Cavity <ul style="list-style-type: none"> <li>• Lungs/ Thoracic wall (lecture)</li> <li>• Anterior thoracic wall and breast</li> <li>• Autonomic nervous system</li> <li>• Heart – Superior and posterior mediastinum</li> </ul>   | Section 2, Chapter 2, 3,4,5<br><br><b>Exam # 5 – Thoracic Cavity</b> |
| 8    | <b>Unit 6</b><br>Abdominal wall/ Peritoneal cavity <ul style="list-style-type: none"> <li>• Abdomen/ Pelvis (lecture)</li> <li>• Anterior Abdominal Wall and Inguinal Canal</li> <li>• Abdominal Neurovasculature</li> <li>• Abdominal Cavity / Digestive System</li> <li>• Posterior Abdominal Wall and Kidney</li> </ul> | Section 3, Chapter 6, 7, 8, 9, 10, 11, 12, 13, 14                    |
| 9    | Review   | <b>Exam # 6 - Abdominal / Pelvic Cavity</b>                          |
| 10   | Finals   | <b>Final Examination</b>   |

### ARC-PA Standards that Pertain to this Course

The Accreditation Review Commission on Education for the Physician Assistant is the accrediting agency that protects the interests of the public and physician assistant profession by defining the standards for physician assistant education and evaluating physician assistant educational programs within the territorial United States to ensure their compliance with those standards. The ARC-PA Standards 4th edition (<http://www.arc-pa.org/accreditation/standards-of-accreditation/>) that are relevant to this course are listed below:

- B1.01 – The curriculum must be consistent with the mission and goals of the program.
- B1.02 – The curriculum must include core knowledge about the established and evolving biomedical and clinical sciences and the application of this knowledge to patient care.
- B1.03 – The curriculum must be of sufficient breadth and depth to prepare the student for the clinical practice of medicine.
- B1.05 – The curriculum *must* include instruction about intellectual honesty and appropriate academic and professional conduct.
- B2.02(a,b,c) – The program curriculum *must* include instruction in the following area of applied medical sciences and their application in clinical practice:
  - a.) Anatomy,
  - b.) physiology,
  - c.) pathophysiology,
  - d.) pharmacology and pharmacotherapeutics,

- e.) the genetic and molecular mechanisms of health and disease.
- B2.07 – The program curriculum *must* include instruction in technical skills and procedures based on current professional practice.

## **MUPA Competencies Relevant to this Course**

### **Medical Knowledge (MK)**

Graduates will demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care. Graduates will apply the ability to use evidence based medicine, and be able to synthesize areas of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention to care for patients across the life span in culturally diverse populations and rural areas.

### **Patient Care (PC)**

Graduates will demonstrate the ability to make decisions about diagnostic and therapeutic interventions based on patient preferences, current scientific evidence and informed clinical judgement. Graduates will be able to aim health services for patients on disease prevention, health maintenance and patient and family education.

### **Interpersonal & Communication Skills (ICS)**

Graduates will employ skills to work in inter-professional teams that will result in effective communication with patients, other health care professionals, and patient families. Graduates will be able to accurately document information they obtain with respect to medical, financial, legal, and accuracy purposes.

### **Professionalism (P)**

Graduates will demonstrate commitment to excellence in professional relationships and on-going professional development (including life - long learning). Physician Assistants are expected to have a firm understanding of legal and regulatory requirements as well as the appropriate role of physician assistants in health care.

## **University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/policies/). (URL:

<http://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy



## Marshall University E-Mail Accounts and Technology Assistance

You must have and use your MU email account. Your personal email accounts will not be used for official communication with Marshall University programs and personnel. You may redirect your MU email to your own personal email account, but you must sign in to your MU account to do that. Marshall University uses Office 365 email. For more information, visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: <https://www.marshall.edu/it/office365/> ).

For computer and browser requirements, see "Get Connected" and "Internet Browser" at [Student Resources: First Steps](#). See also [IT: Recommended Hardware](#) (URLs: <http://www.marshall.edu/muonline/student-resources/> and <http://www.marshall.edu/it/recommendations/> ). To check your browsers, use the [Blackboard Browser Checker](#) and ensure that you set permissions properly and have all the necessary plug-ins. (URL: [https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support/BrowserChecker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker) )

- Students must be able to use Marshall Email, as well as the following tools in Blackboard: course messages, assignments, discussion board forums, tests, blogs, journals, wikis, and groups. Links to Blackboard Help and tutorials are available on the Start Here page and on the Tech Support tab in Blackboard. [Adobe Acrobat Reader](#) may be needed to read some files. This plug-in is available free. (URL: <https://get.adobe.com/reader/> ) See the Tech Support tab in Blackboard for additional information and links.
- Students may be required to submit assignments as Microsoft Word documents (.docx), using the most recent Microsoft Office suite. Office 365 is available at no extra charge to students enrolled at MU. For information visit [Marshall IT: Office 365](#) (URL: <http://www.marshall.edu/it/office365/> ).
- See the Tech Support tab in Blackboard for additional information on browsers, technology, and apps.

If you have technical problems, please contact one or more of the following:

- [Blackboard Support Center](#) (URL: <http://marshall.edusupportcenter.com> )
- [Marshall Information Technology \(IT\) Service Desk](#) (Help Desk) (URL: <http://www.marshall.edu/it/departments/it-service-desk/> )  
Huntington: (304) 696-3200
- [Email the IT Service Desk](#) ([itservicedesk@marshall.edu](mailto:itservicedesk@marshall.edu) )

## Technology and Technical Skill Requirement

- Students must be proficient in the use of computers, the Internet, browsers, Microsoft Office Word, and other common applications.

## Course and Faculty Evaluations

Policy Statement Regarding Student Compliance with Course Evaluations: The Physician Assistant Program at Marshall University has a process to assess all aspects of the program. It is important to gain information from our PA students. By implementing a systematic method of collecting student feedback, appropriate PA program faculty, the Program Director, the Curriculum Committee and the Self-Assessment Committee are able to carefully review and respond to student course ratings to identify strengths and weaknesses and promote positive curricular change. Therefore, students are required to complete evaluations of all courses and rotations and their associated faculty/ preceptors.



Students who do not to complete course/rotation evaluations within the established timeframe will receive one warning of the penalties for non-compliance. If the student still has not completed the evaluations within 48 hours of the warning, they will have written warning submitted to the Student Progress Committee for possible inclusion as part of their academic record. The PA Program also recognizes that repeated noncompliance is an issue of professional conduct. If noncompliance occurs in subsequent courses, the student will be required to meet with the Student Progress Committee.

### **Modifications in Course Syllabus Disclaimer**

Every attempt has been made to provide a complete syllabus that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs and experiences of the students.

## Bibliography

Allman, B.L., Beveridge, T.S., Johnson, M., Power, A., & Power, N.E. (2015). Anatomy of the nerves and ganglia of the aortic plexus in males. *Journal of anatomy*, 226(1), 93–103. doi:10.1111/joa.12251

Ashton, M.W., & Rozen, W.M. (2012). The venous anatomy of the abdominal wall for deep inferior epigastric artery (DIEP) flaps in breast reconstruction. *Gland surgery*, 1(2), 92-110. doi:10.3978/j.issn.2227-684X.2012.06.01

Dickson, K.A., & Stephens, B.W. (2015). It's all in the mime: Actions speak louder than words when teaching the cranial nerves. *Anatomical sciences education*, 8(6), 584–592. doi:10.1002/ase.1531

Dissabandara, L.O., Khoo, T.K., Nirthanan, S.N., & Tedman, R. (2015). Role of cadaveric dissections in modern medical curricula: a study on student perceptions. *Anatomy & cell biology*, 48(3), 205–212. doi:10.5115/acb.2015.48.3.205

Johanson, N.A., Hirsch, B.E., & Waligora, A.C. (2009). Clinical anatomy of the quadriceps femoris and extensor apparatus of the knee. *Clinical orthopaedics and related research*, 467(12), 3297–3306. doi:10.1007/s11999-009-1052-y

**Request for Graduate Course Addition**

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: School of MedicineDept/Division: PA ProgramAlpha Designator/Number: PAS 530☒ Graded ☐ CR/NCContact Person: Ginger Boles, MS PA-CPhone: 304-629-1341**NEW COURSE DATA:**New Course Title: Pharmacology PrinciplesAlpha Designator/Number: 

|   |   |   |  |   |   |   |  |  |  |
|---|---|---|--|---|---|---|--|--|--|
| P | A | S |  | 5 | 3 | 0 |  |  |  |
|---|---|---|--|---|---|---|--|--|--|

Title Abbreviation: 

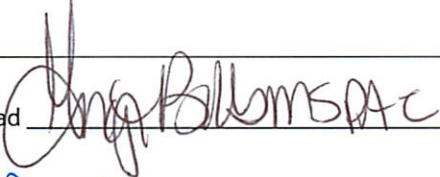
|   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|--|--|
| P | h | a | r | m | a | c | o | l | o | g | y |  | P | r | i | n | c | i | p | l | e | s |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|--|--|

(Limit of 25 characters and spaces)

Course Catalog Description: This course, the first in a series, develops skills related to applying general principles of pharmacology and pharmacotherapeutics to the treatment and management of disease.  
(Limit of 30 words)Co-requisite(s): PAS 510, 520, 550First Term to be Offered: Spring 2021Prerequisite(s): Admission to PA programCredit Hours: ThreeCourse(s) being deleted in place of this addition (must submit course deletion form): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head



Date

8/20/19

Registrar

510912

Date

8/21/19

College Curriculum Chair



Date

8/26/19

Graduate Council Chair



Date

10/1/19

## Request for Graduate Course Addition - Page 2

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College: School of Medicine

Department/Division: PA Program

Alpha Designator/Number: PAS 530

---

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Course will be taught by Faculty in the PA program and/ or School of Medicine

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

N/A

Course duplication was addressed in the Addition of Degree application

3. REQUIRED COURSE: If this course will be required by another department(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

N/A

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

N/A

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable.

Course will be taught by faculty in the PA program and/or School of Medicine

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See attached



## **Request for Graduate Course Addition - Page 3**

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**7. COURSE OUTLINE (May be submitted as a separate document)**

See attached

**8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)**

See Attached

**9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)**

See Attached

## **Request for Graduate Course Addition - Page 4**

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

See Attached

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

N/A

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

See attached

## Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Course Number and Title:

Catalog Description:

Prerequisites:

First Term Offered:

Credit Hours:

Department: Physician Assistant Program

Course Number and Title: PAS 530 Pharmacology Principles

Catalog Description: This course, the first in a series, develops skills related to applying general principles of pharmacology and pharmacotherapeutics to the treatment and management of disease

First Term Offered: Spring 2021

Credit Hours: Three



PHYSICIAN ASSISTANT PROGRAM

## **MUPA Program Pharmacology Principles - PAS 530 Course Syllabus**

### **Course Description**

This course, the first in a series, develops skills related to applying general principles of pharmacology and pharmacotherapeutics to the treatment and management of disease.

### **Credits**

Three (3) credit hours

### **Prerequisites**

Admission to the Marshall University Physician Assistant Program.

### **Course Goals**

- Understand chemical and physical properties of drugs and their interactions with cellular receptors.
- Understand the processes of drug metabolism and elimination.
- Learn the actions and mechanisms of drugs affecting the autonomic nervous system, central nervous system, cardiovascular system, endocrine system, as well as the respiratory, gastrointestinal, and other systems of the body.
- Understand the principles of antimicrobial therapy and chemotherapeutic drugs.
- Understand drug interactions at the cellular level.

### **Term/Year**

Spring Semester 2021

### **Class Meeting Days/Times**

TBA

### **Location**

TBA

### **Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/>).

## Course Director

Jaclyn Kiser, MS PA-C

Office: TBA

Office Hours :TBA

Office Phone (304) 691-1854

Email: [kiserj@marshall.edu](mailto:kiserj@marshall.edu)

## Course Instructors

TBA

## Contact Information

TBA

## Required and/or Recommended Texts and Materials

Stringer, J. L. (2017). *Basic concepts in pharmacology: What you need to know for each drug class, 5th ed.* New York, NY: McGraw-Hill.

\*The Marshall University PA program has an online database of textbooks available to the students. The website for the online database is <http://accessmedicine.mhmedical.com>. Most textbooks used throughout the program can be found on the Access Medicine website.

## Attire

Per the Marshall University Physician Assistant Program Policy.

## Attendance/Participation Policy

Attendance is vital to understanding course content. It is mandatory for all lectures/clinical labs, and is a reflection of your commitment, dedication, and work ethic. Requests for excused absences must be submitted to the course director via email as soon as the circumstance arises. Failure to attend may affect your grade or require discussion with the course director.

## Course Requirements

- Students are expected to attend and be on time for all scheduled lectures and learning activities.
- Students are expected to participate in all activities.
- Students are expected to be prepared for each lecture/learning activity by reading all assignments prior to the scheduled lecture/activity.
- Students are expected to clean up work area prior to leaving the classroom or laboratory.
- Completion of course & faculty evaluations. (see policy statement at the end of this syllabus)

## Methodologies of Teaching and Student Assessment

Student attainment of expected learning outcomes will be practiced and achieved using various instructional and learning methods including; lecture, in-class discussion, independent learning, and/or video/audio/graphic illustrations. This is subject to variation throughout the course based upon instructor preferences and the needs of the students. Student achievement of learning outcomes will be assessed using; quizzes, examinations, assignments, and a cumulative final examination.



\*The final grade will be determined by earned points/total points. \*

| Component              | % of Final Grade |
|------------------------|------------------|
| Examinations           | 50%              |
| Final Examination      | 20%              |
| Quizzes                | 20%              |
| Assignments            | 5%               |
| Professionalism Rubric | 5%               |

Per the MUPA program policy, the following grading scale applies:

- A – 89.5 - 100%
- B – 79.5 - 89.4%
- C – 69.5 - 79.4%
- F – < 69.4 %

### Student Learning Outcomes, Competencies, and Instructional Objectives

| Student Learning Outcomes<br>Upon successful completion of this course, PA students will be able to: | ARC-PA Standards/<br>Competencies | Instructional Objectives<br>Upon successful completion of this course, PA students will be able to:  |
|--|-----------------------------------|--|
| Describe the physical and chemical properties of drugs and their interactions with receptors.        | B2.02(d)<br>(MK)                  | <ul style="list-style-type: none"> <li>Describe the various types of chemical bonds that drugs will make with receptors.</li> <li>Describe how the structural formula of a drug is related to its functional groups, and how its composition is largely responsible for its activity and specificity.</li> <li>Discuss the acid-base properties of drugs.</li> <li>Explain the Henderson-Haselbach Equation.</li> <li>Discuss the four families of receptors that are responsible for transducing extracellular signals into intracellular responses.</li> <li>Describe the characteristics of receptors.</li> </ul> |

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to: | <b>ARC-PA Standards/ Competencies</b> | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|---|---------------------------------------|---|
| Describe the processes of drug absorption, distribution, metabolism, and elimination.                       | B2.02(d) (MK), (PC)                   | <ul style="list-style-type: none"> <li>• Discuss varying routes of administration of drugs.</li> <li>• Contrast passive diffusion, active transport, and endocytosis/exocytosis in the process of absorption.</li> <li>• Detail the effect of pH on drug absorption.</li> <li>• Describe the concept of bioavailability and the factors that influence it.</li> <li>• Discuss drug distribution and the factors that affect a drug's ability to cross cell membranes and bind to plasma proteins.</li> <li>• Describe the process of drug metabolism, in particular, in relation to liver function in this process.</li> <li>• Explain the process of drug elimination and the variable routes this is accomplished.</li> </ul> |
| Describe the actions and mechanisms of drugs affecting the autonomic nervous system.                        | B2.02(d) (MK), (PC)                   | <ul style="list-style-type: none"> <li>• Contrast the functions of the parasympathetic and sympathetic nervous systems.</li> <li>• Discuss the key neurotransmitters involved in nervous system control/function.</li> <li>• Compare and contrast cholinergic agonist and cholinergic antagonist functions.</li> <li>• Compare and contrast adrenergic agonist and adrenergic antagonist functions.</li> </ul>  |

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to: | <b>ARC-PA Standards/ Competencies</b> | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|---|---------------------------------------|---|
| Discuss the actions and mechanisms of drugs affecting the central nervous system.                           | B2.02(d) (MK), (PC)                   | <ul style="list-style-type: none"> <li>• Identify key neurotransmitters involved with regulation and function of the central nervous system.</li> <li>• Discuss adverse effects that occur with drugs that act on the central nervous system.</li> <li>• Contrast CNS depressants with CNS stimulants, detailing receptors that are involved, effects, and adverse reactions that can occur.</li> <li>• Describe the various drugs/classes of drugs used in anesthesia and how they work.</li> <li>• Explain the different types of antidepressants and how they exert their effects, along with possible adverse reactions.</li> <li>• Contrast drug tolerance and drug dependence.</li> </ul> |
| Discuss properties and mechanism of action for drugs that affect the cardiovascular system.                 | B2.02(d) (MK)                         | <ul style="list-style-type: none"> <li>• Identify the mechanism of action of antihypertensive drugs.</li> <li>• Describe the properties of drugs used in ischemic heart disease and congestive heart failure.</li> <li>• Discuss antiarrhythmic drugs.</li> <li>• Summarize properties of drugs that prevent blood clotting, those that lyse clots, and those used to treat anemia.</li> <li>• Detail the mechanism of action of drugs that are used as lipid-lowering agents.</li> </ul>   |

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to: | <b>ARC-PA Standards/ Competencies</b> | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|---|---------------------------------------|---|
| Discuss principles and concepts of antimicrobial therapy.   | B2.02(d)<br>(MK)                      | <ul style="list-style-type: none"> <li>• Define narrow, broad, and extended spectrum drugs.</li> <li>• Contrast bacteriostatic vs. bactericidal antibiotics.</li> <li>• Describe how bacteria develop resistance to antibiotics.</li> <li>• Identify potential adverse effects of antibiotics and categorize as allergic, toxic, or idiosyncratic.</li> <li>• Explain the concept of synergistic effect.</li> <li>• Detail how antimicrobials are generally classified.</li> <li>• Identify drugs that inhibit the synthesis of the bacterial cell wall.</li> <li>• Identify drugs that inhibit bacterial protein synthesis.</li> <li>• Discuss the mechanism of action of folate antagonists.</li> <li>• Describe the MOA and indications of the quinolones.</li> <li>• Explain why combination therapies are employed for prolonged periods of time to treat the mycobacteria that causes tuberculosis and leprosy.</li> <li>• Discuss antifungals based on their mechanism of action.</li> <li>• Identify drugs used to treat helminths based on their groupings.</li> <li>• Outline the basic approaches to control viral diseases, and identify drugs used in HIV, influenza, and Hepatitis B and C.</li> <li>• Discuss the importance of metronidazole.</li> <li>• Identify anti-malaria drugs and special features they possess.</li> <li>• Contrast cytotoxic drugs, hormonal agents, and signal transduction inhibitors.</li> <li>• Discuss the adverse effects associated with anticancer drugs.</li> </ul> |

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to: | <b>ARC-PA Standards/<br/>Competencies</b> | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|---|---|---|
| Discuss drugs that affect the endocrine system.   | B2.02(d)<br>(MK)                          | <ul style="list-style-type: none"> <li>• Discuss adrenocortical hormones.</li> <li>• Describe the sex steroids.</li> <li>• Explain thyroid and parathyroid drugs.</li> <li>• Detail the mechanisms of action of insulin, glucagon, and oral hypoglycemic drugs.</li> </ul>  |
| Explain mechanism of action, indications, and contraindications for miscellaneous drugs.                    | B2.02(d)<br>(MK), (PC)                    | <ul style="list-style-type: none"> <li>• Histamine and antihistamines</li> <li>• Respiratory drugs</li> <li>• Drugs that affect the GI tract</li> <li>• Nonnarcotic analgesics and anti-inflammatory drugs</li> <li>• Immunosuppressives</li> <li>• Drugs used in osteoporosis</li> <li>• Toxicology and Poisoning</li> </ul> |

### Course Content and Assignments

| <b>Week</b> | <b>Topics</b>   | <b>Activity/Assignment</b>   |
|-------------|---|--|
| 1           | Receptor Theory, Absorption, Distribution, Clearance,   | Basic Concepts in Pharmacology – Chapters 1, 2, & 3<br><b>Quiz # 1</b>                               |
| 2           | Pharmacokinetics, Drug Metabolism & Renal Elimination   | Basic Concepts in Pharmacology – Chapters 4 & 5<br><b>Quiz # 2</b>                                   |
| 3           | Review of the Autonomic Nervous System, Cholinergic Agonists, Cholinergic Antagonists   | Basic Concepts in Pharmacology – Chapters 6, 7 & 8<br><b>Quiz # 3</b>                                |
| 4           | Adrenergic Agonists, Adrenergic Antagonists   | Basic Concepts in Pharmacology – Chapters 9 & 10 - <b>Quiz # 4</b><br><b>Exam # 1</b>                |
| 5           | Drugs that Act on the Central Nervous System: Anxiolytic and Hypnotic Drugs, Mood Disorder Drugs, Antipsychotics or Neuroleptics, and Antiepileptic Drugs | Basic Concepts in Pharmacology – Chapters 17, 18, 19, & 21<br><b>Quiz # 5</b>                        |
| 6           | Drugs that Act on the Central Nervous System, Drugs used in Dementia, Drugs used in Parkinson Disease, Narcotics, General/Local Anesthetics               | Basic Concepts in Pharmacology – Chapters 16, 20, 22, 23, & 24<br><b>Quiz # 6</b><br><b>Exam # 2</b> |



| Week | Topics  | Activity/Assignment  |
|------|---|--|
| 7    | Drugs that Affect the Cardiovascular System:<br>Antihypertensive Drugs, Drugs Used in Ischemic Heart Disease and Congestive Heart Failure, Antiarrhythmic Drugs | Basic Concepts in Pharmacology – Chapters 11, 12, & 13<br><br><b>Quiz # 7</b>            |
| 8    | Drugs that Affect Blood, Lipid-Lowering Drugs<br>Introduction to Chemotherapy   | Basic Concepts in Pharmacology – Chapters 14, 15, & 26<br><b>Quiz # 8</b>                |
| 9    | Inhibitors of cell wall synthesis, protein synthesis inhibitors, folate antagonists, quinolones, and urinary tract antiseptics                                  | Basic Concepts in Pharmacology – Chapters 26, 27, 28, & 29<br><br><b>Quiz # 9</b>        |
| 10   | Drugs used in Tuberculosis and Leprosy, Antifungals, Anthelmintics, Antivirals, Antiprotozoals, and Anticancer drugs.   | Basic Concepts in Pharmacology – Chapters 30-35<br><b>Quiz # 10</b><br><b>Exam # 4</b>   |
| 11   | Drugs that Affect the Endocrine System<br>Andrenocortical Hormones, Sex Steroids  | Basic Concepts in Pharmacology – Chapters 36 & 37<br><br><b>Quiz # 11</b>                |
| 12   | Thyroid and Parathyroid Drugs, Insulin, Glucagon, and Oral Hypoglycemic Drugs   | Basic Concepts in Pharmacology – Chapters 38 & 39<br><b>Quiz # 12</b><br><b>Exam # 5</b> |
| 13   | Histamine and Antihistamines, Respiratory Drugs, Drugs that Affect the GI Tract   | Basic Concepts in Pharmacology: Chapters 40, 41, & 42<br><b>Quiz # 13</b>                |
| 14   | Nonnarcotic Analgesics and Anti-inflammatory Drugs, Immunosuppressives, Drugs Used in Osteoporosis, Toxicology and Poisoning                                    | Basic Concepts in Pharmacology – Chapters 43, 44, 45, & 46<br><br><b>Quiz # 14</b>       |
| 15   | Review for finals   | <b>Quiz #15</b>  |
| 16   | Finals  | <b>Final Exam</b>  |
| 17   | Remediation   |  |

### ARC-PA Standards that Pertain to this Course

The Accreditation Review Commission on Education for the Physician Assistant is the accrediting agency that protects the interests of the public and physician assistant profession by defining the standards for physician assistant education and evaluating physician assistant educational programs within the territorial United States to ensure their compliance with those standards. The ARC-PA Standards, 4<sup>th</sup> ed. that are relevant to this course are listed below:

4<sup>th</sup> Ed. ARC-PA Standards (<http://www.arc-pa.org/accreditation/standards-of-accreditation/>)

- B1.01 – The curriculum *must* be consistent with the mission and goals of the program.
- B1.03 – The curriculum must be of sufficient breadth and depth to prepare the student for the clinical practice of medicine.
- B1.04 – The curriculum design *must* reflect sequencing that enables students to develop the *competencies* necessary for current and evolving clinical practice.
- B1.09 – For each didactic and clinical course, the program *must* define and publish *instructional objectives* that guide student acquisition of required *competencies*.
- B2.02(d) – The program *must* include instruction in the following areas of applied medical sciences and their application in clinical practice:
  - a.) anatomy
  - b.) physiology
  - c.) pathophysiology
  - d.) pharmacology and pharmacotherapeutics
  - e.) the genetic and molecular mechanisms of health and disease.

## **MUPA Competencies Relevant to this Course**

### **Medical Knowledge (MK)**

Graduates will demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care. Graduates will apply the ability to use evidence based medicine, and be able to synthesize areas of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention to care for patients across the life span in culturally diverse populations and rural areas.

### **Patient Care (PC)**

Graduates will demonstrate the ability to make decisions about diagnostic and therapeutic interventions based on patient preferences, current scientific evidence and informed clinical judgement. Graduates will be able to aim health services for patients on disease prevention, health maintenance and patient and family education.

## **University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/policies/). (URL: <http://www.marshall.edu/academic-affairs/policies/>)

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## **Marshall University E-Mail Accounts and Technology Assistance**

You must have and use your MU email account. Your personal email accounts will not be used for official communication with Marshall University programs and personnel. You may redirect your MU



email to your own personal email account, but you must sign in to your MU account to do that. Marshall University uses Office 365 email. For more information, visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: <https://www.marshall.edu/it/office365/>).

For computer and browser requirements, see "Get Connected" and "Internet Browser" at [Student Resources: First Steps](#). See also [IT: Recommended Hardware](#) (URLs: <http://www.marshall.edu/muonline/student-resources/> and <http://www.marshall.edu/it/recommendations/>). To check your browsers, use the [Blackboard Browser Checker](#) and ensure that you set permissions properly and have all the necessary plug-ins. (URL: [https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support/BrowserChecker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker) )

- Students must be able to use Marshall Email, as well as the following tools in Blackboard: course messages, assignments, discussion board forums, tests, blogs, journals, wikis, and groups. Links to Blackboard Help and tutorials are available on the Start Here page and on the Tech Support tab in Blackboard. [Adobe Acrobat Reader](#) may be needed to read some files. This plug-in is available free. (URL: <https://get.adobe.com/reader/> ) See the Tech Support tab in Blackboard for additional information and links.
- Students may be required to submit assignments as Microsoft Word documents (.docx), using the most recent Microsoft Office suite. Office 365 is available at no extra charge to students enrolled at MU. For information visit [Marshall IT: Office 365](#) (URL: <http://www.marshall.edu/it/office365/> ).
- See the Tech Support tab in Blackboard for additional information on browsers, technology, and apps.

If you have technical problems, please contact one or more of the following:

- [Blackboard Support Center](#) (URL: <http://marshall.edusupportcenter.com> )
- [Marshall Information Technology \(IT\) Service Desk](#) (Help Desk) (URL: <http://www.marshall.edu/it/departments/it-service-desk/> )  
Huntington: (304) 696-3200
- [Email the IT Service Desk](#) ([itservicedesk@marshall.edu](mailto:itservicedesk@marshall.edu) )

## Technology and Technical Skill Requirement

- Students must be proficient in the use of computers, the Internet, browsers, Microsoft Office Word, and other common applications.

## Course & Faculty Evaluations

Policy Statement Regarding Student Compliance with Course Evaluations: The Physician Assistant Program at Marshall University has a process to assess all aspects of the program. It is important to gain information from our PA students. By implementing a systematic method of collecting student feedback, appropriate PA program faculty, the Program Director, the Curriculum Committee and the Self-Assessment Committee are able to carefully review and respond to student course ratings to identify strengths and weaknesses and promote positive curricular change. Therefore, students are required to complete evaluations of all courses and rotations and their associated faculty/ preceptors. Students who do not to complete course/rotation evaluations within the established timeframe will receive one warning of the penalties for non-compliance. If the student still has not completed the evaluations within 48 hours of the warning, they will have written warning submitted to the Student

Progress Committee for possible inclusion as part of their academic record. The PA Program also recognizes that repeated noncompliance is an issue of professional conduct. If noncompliance occurs in subsequent courses, the student will be required to meet with the Student Progress Committee.

### **Modifications in Course Syllabus Disclaimer**

Every attempt is made to provide a complete syllabus that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs and experiences of the students.

## Bibliography

Carvalho de Figueiredo, R., Rios, D.R.A., & Silva, I.V.G. (2019). Effect of different classes of antihypertensive drugs on endothelial function and inflammation. *International journal of molecular science*, 20(14), 3458. doi:10.3390/ijms20143458

Colgan, R., & Williams, M. (2011). Diagnosis and treatment of acute uncomplicated cystitis. *American family physician*, 84(7), 771-776. Retrieved from <https://www.aafp.org/afp>

Drago, F., Leggio, G.M., Salomone, S., & Torrisi, S.A. (2019). Therapeutic challenges of post-traumatic stress disorder: Focus on the dopaminergic system. *Front. pharmacol.*, 10, 404. doi:10.3389/fphar.2019.00404

Farzana, L.K., Subramanyam, R., & Vaswani, M. (2003). Role of selective serotonin reuptake inhibitors in psychiatric disorders: A comprehensive review. *Progress in neuro-psychopharmacology and biological psychiatry*, 27(1), 85-102. doi:10.1016/S0278-5846(02)00338-X

Raj, J.P., Rawla, P., & Sunkara, T. (2018). Updated review of current pharmacological and non-pharmacological management of irritable bowel syndrome. *Life sciences*, 212, 176-181. doi:10.1016/j.lfs.2018.10.001



## Request for Graduate Course Addition

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: School of Medicine

Dept/Division: PA Program

Alpha Designator/Number: PAS 550

☒ Graded ☐ CR/NC

Contact Person: Ginger Boles, MS PA-C

Phone: 304-629-1341

## NEW COURSE DATA:

New Course Title: History and Physical Exam

Alpha Designator/Number: P A S 5 5 0

Title Abbreviation: H i s t o r y a n d P h y s i c a l E x a m

(Limit of 25 characters and spaces)

Course Catalog Description: This course focuses on the medical record and the skills needed to obtain a medical history and perform a complete physical examination. Students will apply knowledge through experiential components

(Limit of 30 words)

Co-requisite(s): PAS 510, 520, 530

First Term to be Offered: Spring 2021

Prerequisite(s): Admission to PA program

Credit Hours: Three

Course(s) being deleted in place of this addition (must submit course deletion form): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head

Date

Registrar

Date

College Curriculum Chair

Date

Graduate Council Chair

Date

## Request for Graduate Course Addition - Page 2

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College: School of Medicine

Department/Division: PA Program

Alpha Designator/Number: PAS 550

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Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Course will be taught by Faculty in the PA program and/ or School of Medicine

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

N/A

Course duplication was addressed in the Addition of Degree application

3. REQUIRED COURSE: If this course will be required by another department(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

N/A

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

N/A

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable.

Course will be taught by faculty in the PA program and/or School of Medicine

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See attached

## **Request for Graduate Course Addition - Page 3**

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### **7. COURSE OUTLINE (May be submitted as a separate document)**

See attached

### **8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)**

See Attached

### **9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)**

See Attached

## **Request for Graduate Course Addition - Page 4**

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

See Attached

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

N/A

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

See attached

## Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Course Number and Title:

Catalog Description:

Prerequisites:

First Term Offered:

Credit Hours:

Department: Physician Assistant Program

Course Number and Title: PAS 550 History and Physical Exam

Catalog Description: This course focuses on the medical record and the skills needed to obtain a medical history and perform a complete physical examination. Students will apply knowledge through experiential components

First Term Offered: Spring 2021

Credit Hours: Three





## **MUPA Program History and Physical Examination – PAS 550 Course Syllabus**

### **Course Description**

This course focuses on the medical record and the skills needed to obtain a medical history and perform a complete physical examination. Students will apply knowledge through experiential components.

### **Credits**

Three (3) credit hours (includes lab)

### **Prerequisites**

Admission to the Marshall University Physician Assistant Program

### **Course Goals**

- Establish a firm foundation of knowledge regarding the components of a comprehensive history and physical examination.
- Learn how to perform a comprehensive history and physical examination on patients across the life span from diverse populations.
- Develop interpersonal and communication skills pertinent to patient care and relaying information to interprofessional team members.
- Develop and display professionalism as it relates to the PA profession and the Marshall University Physician Assistant Program

### **Term/Year**

Spring Semester 2021

### **Class Meeting Days/Times**

TBA

### **Location**

TBA

### **Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/>).

## Course Director

Denise Chambers MS, PA-C

Office: TBA

Office Hours: 8 am to 12 pm M-F

Office Phone: (304) 691-1843

Marshall Email: [chambersde@marshall.edu](mailto:chambersde@marshall.edu)

## Course Instructors

TBA

## Required Texts and Materials

Bickley, L.S. (2019). *Bates guide to physical examination and history taking, 12<sup>th</sup> ed.* Philadelphia, PA: Lippincott, Williams, and Wilkins.

Ball, J.W., & Dains, J.E. (2019). *Seidel's guide to physical examination: an inter-professional approach, 9<sup>th</sup> Ed.* St. Louis, MO: Elsevier.

\*The Marshall University PA program has an online database of textbooks available to the students. The website for the online database is <http://accessmedicine.mhmedical.com>. Most textbooks used throughout the program can be found on the Access Medicine website.

## Required Equipment

- Stethoscope
- Reflex hammer
- Watch with a second hand
- Penlight or flash light

## Attire

In addition to Marshall University Physician Assistant Program Policy;

Attire for each lab: MUPA-approved scrubs, closed-toe shoes, non-porous sneakers, white coat and name badge

Attire for evaluations: Name badge, white coat and business casual attire or MUPA-approved scrubs

## Attendance/Participation Policy

Attendance is vital to understanding course content. It is mandatory for all lectures/clinical labs, and is a reflection of your commitment, dedication, and work ethic. Requests for excused absences must be submitted to the course director via email as soon as the circumstance arises. Failure to attend may affect your grade or require discussion with the course director.

## Course Requirements

- Students are expected to attend and be on time for all scheduled lectures and learning activities.
- Students are expected to participate in all activities.
- Students are expected to be prepared for each lecture/learning activity by reading all assignments prior to the scheduled lecture/activity.
- Students are expected to clean up work area prior to leaving the classroom or laboratory.
- Completion of course & faculty evaluations. (see policy statement at the end of this syllabus)

## Methodologies of Teaching and Student Assessment

Student attainment of expected learning outcomes will be practiced and achieved using various instructional and learning methods including; lecture, in-class discussion, independent learning, and/or video/audio/graphic illustrations. This course also has a clinical skills laboratory component where students will develop knowledge and skills through experiential learning with standardized patient encounters. This is subject to variation throughout the course based upon instructor preferences and the needs of the students. Student achievement of learning outcomes will be assessed using; quizzes, examinations, and a cumulative final examination.

\*The final grade will be determined by earned points/total points. \*

| Component               | % of Final Grade |
|-------------------------|------------------|
| Examinations            | 50%              |
| Final Examination       | 20%              |
| Quizzes                 | 20%              |
| Assignments             | 5%               |
| Professionalism Rubrics | 5%               |

Per the MUPA program policy, the following grading scale applies:

- A – 89.5 - 100%
- B – 79.5 - 89.4%
- C – 69.5 - 79.4%
- F – < 69.4 %

### Student Learning Outcomes, Competencies, and Instructional Objectives

| Student Learning Outcomes   | ARC-PA Standards/                                    | Instructional Objectives  |
|---|--|---|
| Upon successful completion of this course, PA students will be able to:   | Competencies   | Upon successful completion of this course, PA students will be able to:   |
| Elicit a comprehensive history, recognizing verbal and non-verbal cues from diverse patients across the lifespan.   | B1.03, B1.04, B2.04 (ICS), (MK), (PBL)               | <ul style="list-style-type: none"> <li>List the components of a comprehensive health history.</li> <li>Describe content of each component.</li> <li>Identify information that may suggest possible pathology.</li> <li>Use effective communication skills to be sensitive to patient culture and diversity.</li> </ul>  |
| Perform a comprehensive physical examination from diverse patients across the lifespan.   | B1.02, B2.03, B2.04, B2.05, B2.06 (MK), (ICS), (PBL) | <ul style="list-style-type: none"> <li>List components of comprehensive physical examination.</li> <li>Describe content of each component.</li> <li>Identify information that may suggest possible pathology.</li> <li>Perform a comprehensive physical examination on a child, recognizing the differences in findings compared to the physical examination of an adult.</li> </ul>  |
| Communicate the findings of a comprehensive history and physical examination obtained on a standardized patient accurately, either verbally or in written format. | B1.03, B1.04, B1.06 (PBL), (ICS), (MK), (P)          | <ul style="list-style-type: none"> <li>Elicit and communicate all historical information outlined as necessary during each standardized patient encounter.</li> <li>Detail all physical examination findings outlined as necessary during each standardized patient encounter.</li> <li>Demonstrate compassion and cultural sensitivity through effective communication skills during each standardized patient encounter.</li> </ul> |
| Participate in continual and critical self-assessment, to identify areas for improvement.   | B2.04, B2.05 (PBL)                                   | <ul style="list-style-type: none"> <li>Assess personal competency in performing a comprehensive history and physical examination.</li> <li>Evaluate performance through self-analysis, as it relates to medical knowledge and communication skills.</li> </ul>  |



| Student Learning Outcomes   | ARC-PA Standards/<br>Competencies  | Instructional Objectives  |
|---|------------------------------------|---|
| Upon successful completion of this course, PA students will be able to:                                   |                                    | Upon successful completion of this course, PA students will be able to:   |
| Describe the components of the PA-patient relationship, and what is required to establish a good rapport. | B1.05, B2.05<br>(ICS), (PBL), (PC) | <ul style="list-style-type: none"> <li>• Discuss the importance of information gained through active listening.</li> <li>• Detail the consequences of a lack of excellent patient rapport.</li> <li>• Identify personal biases that may affect establishing good patient rapport and lead to poor patient outcomes.</li> </ul>  |
| Define professionalism as it relates to the PA profession.  | B1.05<br>(P)                       | <ul style="list-style-type: none"> <li>• Describe unprofessional behaviors.</li> <li>• Demonstrate professionalism during all classes and encounters with standardized patients.</li> <li>• Define academic honesty and integrity, reliability, responsibility, respect for others, self-awareness, professional limitations, and altruism.</li> <li>• Discuss the importance of physical and mental health and well-being in addition to appearance as it relates to professionalism.</li> </ul> |

### Course Content and Assignments

| Week          | Topics   | Activity/Assignment   |
|---------------|--|---|
| <b>WEEK 1</b> | Health History   | Reading: Bates Chapters 1 & 3   |
| <b>WEEK 2</b> | Health History (cont'd)<br>Advanced interviewing                       | <b>Team Base Learning (Lab)</b>   |
| <b>WEEK 3</b> | Ethics and Professionalism<br>Physical Exam<br>Vital Signs             | <b>Written history assignments due</b><br><b>Professionalism quiz</b><br>Bates: Chapters 3 and 4<br>Vital Signs (Lab) |
| <b>WEEK 4</b> | Musculoskeletal System   | Bates: Chapter 16<br>(Lab Practice – musculoskeletal exam)  |
| <b>WEEK 5</b> | Nervous System;<br>Cranial nerves;<br>Dermatomes;<br>Sensory vs. Motor | <b>Quiz on musculoskeletal exams</b><br>Bates: Chapter 17<br><b>Write up of normal neurological exam due</b>          |



| Week    | Topics   | Activity/Assignment   |
|---------|--|---|
| WEEK 6  | Behavioral and Mental Status; Skin, Hair and Nails | Bates: Chapter 5<br><b>(Lab) Practice mini cog exam, write up due</b><br>Practice skin, hair and nails.                       |
| WEEK 7  | Head and Neck                                      | <b>Midterm Exam (SP Experience)</b><br>Bates: Chapter 7   |
| WEEK 8  | Head and Neck Exam (cont'd)                        | <b>Write up of head and neck exam due</b><br><br><b>Written history and physical at the VA during second half of semester</b> |
| WEEK 9  | Thorax Lung and Cardio                             | Bates: Chapters 8 & 9   |
| WEEK 10 | Peripheral Vascular System<br>Abdominal Exam       | Bates: Chapters 11 & 12   |
| WEEK 11 | Breast<br>Female Genitalia                         | Bates: Chapters 10 & 14<br><b>Write up</b>  |
| WEEK 12 | Male Genitalia and Hernias                         | Bates: Chapter 13   |
| WEEK 13 | Pediatric Exam                                     | Bates: Chapter 18   |
| WEEK 14 | Review<br>Standardized Patient Experience GU EXAM  | <b>Write up due on SP Experience</b>  |
| WEEK 15 | Review – Clinical Practice                         | <b>Final Exam</b>   |

### ARC-PA Standards that pertain to this Course

The Accreditation Review Commission on Education for the Physician Assistant is the accrediting agency that protects the interests of the public and physician assistant profession by defining the standards for physician assistant education and evaluating physician assistant educational programs within the territorial United States to ensure their compliance with those standards. The ARC-PA Standards, 4<sup>th</sup> ed. that are relevant to this course are listed below:

4<sup>th</sup> Ed. ARC-PA Standards (<http://www.arc-pa.org/accreditation/standards-of-accreditation/>)

- B1.01 - Curriculum must be consistent with the mission and goals of the program.
- B1.02 - The curriculum must include core knowledge about established and evolving biomedical and clinical sciences and then application of this knowledge to patient care.
- B1.03 - The curriculum must be of sufficient breadth and depth to prepare the student for clinical practice of medicine.
- B1.04 - The curriculum design must reflect sequencing that enables students to develop the competencies necessary for current and evolving clinical practice.
- B1.05 - The curriculum must include instruction about intellectual honesty and appropriate academic and professional conduct.
- B1.06 - The curriculum must include instruction to prepare students to provide medical care to patients from diverse populations.

- B1.09 - For each didactic and clinical course, the program must define and publish instructional objectives to guide student acquisitions of required competencies.
- B2.03 - The program curriculum must include instruction in clinical medicine covering all organ systems.
- B2.04 - The program curriculum, must include instruction in interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families and other health professionals.
- B2.05 - The program curriculum must include instruction in patient evaluation, diagnosis and management.

## **MUPA Competencies Relevant to this Course**

### **Medical Knowledge (MK)**

Graduates will demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care. Graduates will apply the ability to use evidence based medicine, and be able to synthesize areas of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention to care for patients across the life span in culturally diverse populations and rural areas.

### **Interpersonal & Communication Skills (ICS)**

Graduates will employ skills to work in inter-professional teams that will result in effective communication with patients, other health care professionals, and patient families. Graduates will be able to accurately document information they obtain with respect to medical, financial, legal, and accuracy purposes.

### **Patient Care (PC)**

Graduates will demonstrate the ability to make decisions about diagnostic and therapeutic interventions based on patient preferences, current scientific evidence and informed clinical judgement. Graduates will be able to aim health services for patients on disease prevention, health maintenance and patient and family education.

### **Professionalism (P)**

Graduates will demonstrate commitment to excellence in professional relationships and on-going professional development (including lifelong learning). Physician assistants are expected to have a firm understanding of legal and regulatory requirements as well as the appropriate role of physician assistants in health care.

### **Practice-Based Learning & Improvement (PBL)**

Graduates will demonstrate the ability to critically analyze their practice in light of their experience, the medical literature and their own self-analysis and self-improvement.

## **University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/university-policies/). (URL: <http://www.marshall.edu/academic-affairs/policies/>)

- Academic Dishonesty Policy



- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Marshall University E-Mail Accounts and Technology Assistance

You must have and use your MU email account. Your personal email accounts will not be used for official communication with Marshall University programs and personnel. You may redirect your MU email to your own personal email account, but you must sign in to your MU account to do that. Marshall University uses Office 365 email. For more information, visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: <https://www.marshall.edu/it/office365/>).

For computer and browser requirements, see "Get Connected" and "Internet Browser" at [Student Resources: First Steps](http://www.marshall.edu/muonline/student-resources/). See also [IT: Recommended Hardware](http://www.marshall.edu/it/recommendations/) (URLs: <http://www.marshall.edu/muonline/student-resources/> and <http://www.marshall.edu/it/recommendations/>).

To check your browsers, use the [Blackboard Browser Checker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker) and ensure that you set permissions properly and have all the necessary plug-ins. (URL: [https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support/BrowserChecker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker))

- Students must be able to use Marshall Email, as well as the following tools in Blackboard: course messages, assignments, discussion board forums, tests, blogs, journals, wikis, and groups. Links to Blackboard Help and tutorials are available on the Start Here page and on the Tech Support tab in Blackboard. [Adobe Acrobat Reader](https://get.adobe.com/reader/) may be needed to read some files. This plug-in is available free. (URL: <https://get.adobe.com/reader/>) See the Tech Support tab in Blackboard for additional information and links.
- Students may be required to submit assignments as Microsoft Word documents (.docx), using the most recent Microsoft Office suite. Office 365 is available at no extra charge to students enrolled at MU. For information visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: [http://www.marshall.edu/it/office365/](https://www.marshall.edu/it/office365/)).
- See the Tech Support tab in Blackboard for additional information on browsers, technology, and apps.

If you have technical problems, please contact one or more of the following:

- [Blackboard Support Center](http://marshall.edusupportcenter.com) (URL: <http://marshall.edusupportcenter.com> )
- [Marshall Information Technology \(IT\) Service Desk](http://www.marshall.edu/it/departments/it-service-desk/) (Help Desk) (URL: <http://www.marshall.edu/it/departments/it-service-desk/>)  
Huntington: (304) 696-3200
- [Email the IT Service Desk](mailto:itservicedesk@marshall.edu) ([itservicedesk@marshall.edu](mailto:itservicedesk@marshall.edu))

## Technology and Technical Skill Requirement

- Students must be proficient in the use of computers, the Internet, browsers, Microsoft Office Word, and other common applications.

## **Course & Faculty Evaluations**

**Policy Statement Regarding Student Compliance with Course Evaluations:** The Physician Assistant Program at Marshall University has a process to assess all aspects of the program. It is important to gain information from our PA students. By implementing a systematic method of collecting student feedback, appropriate PA program faculty, the Program Director, the Curriculum Committee and the Self-Assessment Committee are able to carefully review and respond to student course ratings to identify strengths and weaknesses and promote positive curricular change. Therefore, students are required to complete evaluations of all courses and rotations and their associated faculty/ preceptors. Students who do not to complete course/rotation evaluations within the established timeframe will receive one warning of the penalties for non-compliance. If the student still has not completed the evaluations within 48 hours of the warning, they will have written warning submitted to the Student Progress Committee for possible inclusion as part of their academic record. The PA Program also recognizes that repeated noncompliance is an issue of professional conduct. If noncompliance occurs in subsequent courses, the student will be required to meet with the Student Progress Committee.

## **Modifications in Course Syllabus Disclaimer**

Every attempt has been made to provide a complete syllabus that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs and experiences of the students.

## Bibliography

Armstrong, S., Collier, D., Hampl, S., Lazorick, S., Skelton, J.A., Perrin, E.M., & Wood, C. (2016). Physical examination findings among children and adolescents with obesity: An evidence-based review. Retrieved from <https://pediatrics.aappublications.org/>

Bryant, D., Johnson, A.M., LeBel, M.E., Litchfield, R., Moro, J., Somerville, L.E., & Willits, K. (2017). Clinical assessment of physical examination maneuvers for superior labral anterior to posterior lesions. *The surgery journal*, 3(4), e154-e162. doi:10.1055/s-0037-1606829

Bryant, D., Johnson, A., Somerville, L., & Willits, K. (2013). Protocol for determining the diagnostic validity of physical examination maneuvers for shoulder pathology. *BMC musculoskeletal disorders*, 14, 60. doi:10.1186/1471-2474-14-60

Dacre, J., Elder, A.T., McManus, I.C., Nair, K., Patrick, A., & Vaughan, L. (2017). The value of the physical examination in clinical practice: An international survey. *Clinical medicine*, 17(6), 490-498. Retrieved from <https://www.newcastle.edu.au/>

Murrell, G.L. (2013). Components of the nasal examination. *Aesthetic surgery journal*, 33(1), 38-42. doi:10.1177/1090820X12469626

**Request for Graduate Course Addition**

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: School of Medicine

Dept/Division: PA Program

Alpha Designator/Number: PAS 600

☒ Graded ☐ CR/NC

Contact Person: Ginger Boles, MS PA-C

Phone: 304-629-1341

**NEW COURSE DATA:**

New Course Title: Clinical Medicine I

Alpha Designator/Number:

P A S 6 0 0

Title Abbreviation:

C l i n i c a l M e d i c i n e I

(Limit of 25 characters and spaces)

Course Catalog Description:  
(Limit of 30 words)

This course, the first in a series, provides intensive study of human diseases and disorders in the selected areas of clinical medicine

Co-requisite(s): PAS 601,602,603,604,605,606

First Term to be Offered: Summer 2021

Prerequisite(s): Completion of First Semester

Credit Hours: Six

Course(s) being deleted in place of this addition (must submit course deletion form): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head

Date

8-20-19

Registrar

Date

8-21-19

College Curriculum Chair

Date

8/26/19

Graduate Council Chair

Date

10/1/19



## Request for Graduate Course Addition - Page 2

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College: School of Medicine

Department/Division: PA Program

Alpha Designator/Number: PAS 600

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Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Course will be taught by Faculty in the PA program and/ or School of Medicine

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

N/A

Course duplication was addressed in the Addition of Degree application

3. REQUIRED COURSE: If this course will be required by another department(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

N/A

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

N/A

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable.

Course will be taught by faculty in the PA program and/or School of Medicine

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See attached

## **Request for Graduate Course Addition - Page 3**

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**7. COURSE OUTLINE (May be submitted as a separate document)**

See attached

**8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)**

See Attached

**9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)**

See Attached

## **Request for Graduate Course Addition - Page 4**

### **10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)**

See Attached

### **11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE**

N/A

### **12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)**

See attached

## Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Course Number and Title:

Catalog Description:

Prerequisites:

First Term Offered:

Credit Hours:

Department: Physician Assistant Program

Course Number and Title: PAS 600 Clinical Medicine I

Catalog Description: This course , the first in a series, provides intensive study of human diseases and disorders in the selected areas of clinical medicine

First Term Offered: Summer 2021

Credit Hours: Six



## **MUPA Program Clinical Medicine I - PAS 600 Course Syllabus**

### **Course Description**

This course, the first in a series, provides intensive study of human diseases and disorders in the selected areas of clinical medicine.

### **Credits**

Six (6) credit hours

### **Prerequisites**

Successful completion of the first semester of the Marshall University Physician Assistant Program.

### **Course Goals**

- Use previously attained fundamental knowledge in biomedical science to new foundational concepts of clinical science.
- Understand pathophysiologic concepts underlying major diseases and disorders within the specified organ systems.
- Cultivate competencies of medical knowledge and practice-based learning and improvement, with the goal of providing the gold standard in patient care through understanding, compassion, and willingness to learn.
- Develop a solid understanding of the evaluation and management of patients regarding the dermatologic, ENOT, musculoskeletal, and neurologic systems, and an increased ability to apply critical thinking skills to the practice of clinical medicine.

### **Term/Year**

Summer Term 2021

### **Class Meeting Days/Times**

TBA

### **Location**

TBA

### **Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/>).



## Course Director

Jaclyn Kiser, MS PA-C

Office TBA

Office hours TBA

Office phone (304) 691-1854

Email: [kiserj@marshall.edu](mailto:kiserj@marshall.edu)

## Course Instructors

TBA

## Required Texts and Materials

Fielding, A., & Lebowitz, H. (Eds.) (2019), *Current medical diagnosis & treatment*, 58 ed. New York, NY: McGraw-Hill.

Fauci, A.S., Hauser, S.L., Jameson, J.L., Kasper, D.L., Longo, D.L., & Loscalzo, J. (Eds.) (2018). *Harrison's principles of internal medicine*, 20 ed. New York, NY: McGraw-Hill.

## Recommended/Optional Texts and Materials

Griffin, L.Y. (Ed.). (2005). *Essentials of musculoskeletal care*, 5th ed. Rosemont, IL: American Academy of Orthopaedic Surgeons.

\*The Marshall University PA program has an online database of textbooks available to the students. The website for the online database is <http://accessmedicine.mhmedical.com>. Most textbooks used throughout the program can be found on the Access Medicine website.

## Attire

Per the Marshall University Physician Assistant Program Policy.

## Attendance/Participation Policy

Attendance is vital to understanding course content. It is mandatory for all lectures/clinical labs, and is a reflection of your commitment, dedication, and work ethic. Requests for excused absences must be submitted to the course director via email as soon as the circumstance arises. Failure to attend may affect your grade or require discussion with the course director.

## Course Requirements

- Students are expected to attend and be on time for all scheduled lectures and learning activities.
- Students are expected to participate in all activities.
- Students are expected to be prepared for each lecture/learning activity by reading all assignments prior to the scheduled lecture/activity.
- Students are expected to clean up work area prior to leaving the classroom or laboratory.
- Completion of course & faculty evaluations. (see policy statement at the end of this syllabus)

## Methodologies of Teaching and Student Assessment

Student attainment of expected learning outcomes will be practiced and achieved using various instructional and learning methods including; lecture, in-class discussion, independent learning, and/or video/audio/graphic illustrations. This is subject to variation throughout the course based upon instructor preferences and the needs of the students. Student achievement of learning outcomes will be assessed using; quizzes, examinations, and a cumulative final examination.

\*The final grade will be determined by earned points/total points. \*

| Component              | % of Final Grade |
|------------------------|------------------|
| Examinations           | 40%              |
| Final Examination      | 20%              |
| Quizzes                | 20%              |
| Assignments            | 15%              |
| Professionalism Points | 5%               |

Per the MUPA program policy, the following grading scale applies:

- A – 89.5 - 100%
- B – 79.5 - 89.4%
- C – 69.5 - 79.4%
- F – < 69.4 %

## Student Learning Outcomes, Competencies, and Instructional Objectives

| Student Learning Outcomes<br>Upon successful completion of this course, PA students will be able to:   | ARC-PA Standards/<br>Competencies | Instructional Objectives<br>Upon successful completion of this course, PA students will be able to:  |
|--|-----------------------------------|--|
| Apply previously attained fundamentals in biomedical sciences to new foundational concepts of clinical medicine relating to diseases of the dermatologic, ENOT, musculoskeletal, and neurological systems. | B1.02, B1.04, B2.02(c,e) (MK)     | <ul style="list-style-type: none"><li>• Describe the structural causes of diseases and how these are manifest in organ system dysfunction.</li><li>• Relate pathophysiologic processes underlying clinical manifestations of common diseases of these systems.</li><li>• Explain the pathogenesis of major conditions related to the diseases within organ systems being studied.</li><li>• Describe the genetic basis of selected diseases.</li></ul> |

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to:   | <b>ARC-PA Standards/ Competencies</b>                              | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|---|--|---|
| Correlate etiologic and epidemiologic data to various diseases and disorders of the dermatological, eyes/ears/nose/throat, musculoskeletal, and neurological systems.   | B1.02, B1.03, B1.06, B2.06, B2.02(e)<br><br>(MK), (PC)             | <ul style="list-style-type: none"> <li>• Identify risk factors of disease processes and disorders of selected systems.</li> <li>• Relate determinants of health and disease to how they influence health outcomes in common diseases of the various systems.</li> <li>• Discuss social conditions and behaviors that predispose patients to disease and decreased function.</li> <li>• Relate the determinants of health and disease to the host immune system, its development, function, and possible dysregulation.</li> </ul>   |
| Utilize evidence- based medicine and best practice guidelines for use in patient counseling regarding modifiable risk factors of disease and preventative care.   | B2.06, B2.09, B2.10<br>(MK), (PC)                                  | <ul style="list-style-type: none"> <li>• Identify key sources of data for epidemiologic purposes.</li> <li>• Use these key sources of data to extrapolate information that will be helpful for patient education and counseling.</li> <li>• Commit to ongoing professional development (including life-long learning).</li> </ul>   |
| Identify pertinent historical data and physical examination findings in relation to disease processes and disorders involving the dermatological, eyes/ears/nose/throat, musculoskeletal, and neurological systems. | B1.05, B1.06, B2.05, B2.06, B2.08, B2.09<br>(MK), (ICS), (PC), (P) | <ul style="list-style-type: none"> <li>• Associate patient age, gender, socioeconomic status, geographic location, living arrangements, and lifestyle behaviors to their presenting symptoms.</li> <li>• Recognize pertinent family history information.</li> <li>• Identify modifiable risk factors and patient behaviors from a history.</li> <li>• Relate a patient's presenting symptoms to the most likely physical examination findings.</li> <li>• Associate pertinent historical data and physical examination findings to most likely underlying disease process.</li> </ul> |

| <b>Student Learning Outcomes</b><br><br>Upon successful completion of this course, PA students will be able to:  | <b>ARC-PA Standards/<br/>Competencies</b>   | <b>Instructional Objectives</b><br><br>Upon successful completion of this course, PA students will be able to:   |
|--|---|--|
| Recommend and interpret appropriate diagnostic and/or laboratory studies given a patient history and physical examination findings for diseases and/or disorders across the lifespan affecting dermatological, eyes/ears/nose/throat, musculoskeletal, and neurological systems. | B1.02, B1.03, B1.04, B1.07, B2.05, B2.06, B2.13<br>(MK), (PC), (SBP)  | <ul style="list-style-type: none"> <li>• Discuss the indications for initial and subsequent diagnostic and laboratory studies.</li> <li>• Describe the indications for preventative screening tests.</li> <li>• Identify the risks associated with diagnostic and laboratory studies.</li> <li>• Select appropriate diagnostic and/or laboratory studies given an appropriate clinical vignette.</li> <li>• Evaluate results of diagnostic and laboratory studies in correlation with given history and physical exam findings.</li> </ul>   |
| Develop a differential diagnosis for patients from diverse populations across the life span by combining given historical and clinical data.   | B1.02, B1.03, B1.04, B1.06, B1.07, B2.03, B2.05<br>(MK), (PC), (PBL)  | <ul style="list-style-type: none"> <li>• Relate the significance of patient evaluation to the development of a differential diagnosis.</li> <li>• Analyze a clinical vignette to develop a differential diagnosis.</li> <li>• Develop multiple differential diagnoses for complicated and/or multisystem cases.</li> <li>• Propose the most likely diagnosis from the differential.</li> <li>• Discuss what factors swayed decision-making when choosing the most likely diagnosis from a differential.</li> </ul>   |
| Develop a treatment plan for diseases and disorders of the dermatological, eyes/ears/nose/throat, musculoskeletal, and neurological systems across the lifespan to include patients from diverse populations.  | B1.02, B1.03, B1.04, B1.06, B1.07, B2.02(d), B2.03, B2.05, B2.06, B2.07, B2.10, B2.13<br>(MK), (PC), (P), (SBP) | <ul style="list-style-type: none"> <li>• Discuss the standard of care regarding the management, treatment, and follow up of various medical conditions.</li> <li>• Formulate a treatment plan in accordance with applicable practice guidelines.</li> <li>• Discuss the indications, contraindications, complications, risks, benefits, and techniques of applicable clinical procedures.</li> <li>• Evaluate patient response to an initiated treatment or intervention.</li> <li>• Express when it is appropriate to place a referral to other health care professionals.</li> </ul> |



| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to:                                  | <b>ARC-PA Standards/<br/>Competencies</b>            | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|--|--|---|
| Distinguish between critical and non-critical initial patient presentations, then identify the appropriate plan of care to implement.        | B1.02, B1.07, B2.05, B2.06<br>(MK), (ICS), (PC), (P) | <ul style="list-style-type: none"> <li>• Describe conditions that constitute medical emergencies.</li> <li>• Discuss the appropriate treatment for a patient presenting with a life-threatening condition.</li> <li>• Detail the criteria for admission to the hospital based on patient presentation.</li> <li>• Detail the criteria for discharge from the hospital or another facility based on patient condition, and course of illness.</li> </ul> |
| Distinguish between surgical and non-surgical patient presentations, then identify the appropriate work/up and/or plan of care to implement. | B1.02, B1.07, B2.05, B2.06<br>(MK), (PC)             | <ul style="list-style-type: none"> <li>• Describe conditions that need urgent surgical consultation.</li> <li>• Discuss appropriate diagnostic and laboratory studies and management of surgical conditions, while awaiting consultation.</li> </ul>  |
| Participate actively in self-analysis and personal development for continual practice based learning and improvement.                        | B1.05, B2.16<br>(PBL), (P)                           | <ul style="list-style-type: none"> <li>• Implement critical analysis of personal experiences.</li> <li>• Demonstrate critical curiosity and dedication to life-long learning.</li> <li>• Display commitment to excellence and on-going professional development.</li> <li>• Demonstrate initiative, self-reflection, and personal growth.</li> <li>• Advocate or debate an ethical dilemma given a patient case study.</li> </ul>                       |



### Course Content and Assignments

| Week | Topics  | Activity/Assignment   |
|------|---|---|
| 1    | Pigmented Lesions, Benign, Pre-Malignant & Malignant neoplasms, Actinic keratosis, Melanoma, Atopic Dermatitis, Psoriasis, Pityriasis Rosea, Lichen Planus, Seborrheic Dermatitis   | CMDT: 103-118; 125; 151-154<br>Harrison's: 324-379<br><br><b>Quiz #1</b>  |
| 2    | Fungal, viral, bacterial and parasitic infections of the skin/Hidradenitis suppurativa<br>Acneiform eruptions<br>Melasma/Vitiligo/Acanthosis Nigricans<br>Alopecia/Onychomycosis/Paronychia   | CMDT: 119-122, 126-129, 131-132, 137-138, 139-140, 144-146, 148-150, 157-160; 134-139; 166-170<br>Harrison's: 324-379<br><br><b>Quiz #2</b>   |
| 3    | Vesiculobullous Disorders, Reactive Erythemas (Urticaria, angioedema, Erythema Multiforme, Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis, Arthropod bites, Photodermatitis, EIC, pilonidal cyst, contact dermatitis, venous stasis ulcers  | CMDT: 146-148; 141-144; 159-160; 132-133; 141-142; 164-166<br>Harrison's: 324-379<br><br><b>Quiz #3</b><br><b>Exam # 1</b>  |
| 4    | Conjunctival, corneal, lacrimal, and lid disorders; vision abnormalities, vascular disorders, retinal disorders, neuro-ophthalmologic disorders, orbital disorders, traumatic injuries; Disorders of the external ear, inner ear, and middle ear; mastoiditis, Meniere disease, tinnitus, and hearing impairment; foreign bodies, and neoplasms | CMDT: 174-210; 210-225;<br>Harrison's: 177-194; 200-208; 129-132<br><br><b>Quiz #4</b>  |
| 5    | Diseases of the Nose & Paranasal Sinuses; Diseases of the Oral Cavity and Pharynx; Diseases of the Salivary Glands; Diseases of the Larynx; Foreign Bodies in the Upper Aerodigestive tract;<br><br>Shoulder Disorders and Upper extremity problems; Spinal Disorders   | CMDT: 225-234; 234-242; Harrison's: 2504f; 194-200, 2008-219 242-243; 243-248; 248-251<br>CMDT: 1690-1697, 1703-1706; 1697-1703<br>Griffin: 144-234, 234-284, 284-400; 710-792<br><br><b>Quiz #5</b><br><b>Exam # 2</b> |

| Week | Topics  | Activity/Assignment  |
|------|---|--|
| 6    | Disorders of the Hip, Disorders of the Knee, and Disorders of the Ankle; Rheumatologic Disorders affecting the Musculoskeletal System;  | CMDT: 1706-1721; 840-897 Griffin: 400-468, 2-30, 34-62, 73-135<br><b>Quiz # 6</b>  |
| 7    | Chest Wall Deformities; Rib fractures; Compartment Syndrome; Benign and Malignant Neoplasms of the Musculoskeletal System   | Griffin: 30-34, 62-73, 135-144<br>Harrison's: 1667; 2975<br><b>Quiz # 7</b><br><b>Exam # 3</b>   |
| 8    | Headache and facial pain; Encephalopathic and Infectious disorders; Movement Disorders  | CMDT: 40-43, 990-997; Harrison's: 85-89; 3096-3108; 998-1013, 1013-1019<br>CMDT: 1024-1031;<br>Harrison's: 3120-3141<br><b>Quiz #8</b>   |
| 9    | Neurocognitive and Neuromuscular disorders; Cranial Nerve Disorders   | CMDT: 1031- 1040, 1058-1060<br>Harrison's: 3108-3120, 3239-3254, 3154-3158; 3166-3172<br><b>Quiz # 9</b>   |
| 10   | Seizures & Epilepsy   | CMDT: 997-1002<br>Harrison's: 3050-3068<br><b>Quiz # 10</b><br><b>Exam # 4</b>   |
| 11   | Vascular Disorders – Arteriovenous malformation, cerebral aneurysm, intracranial hemorrhage, stroke, syncope, and transient ischemic attack   | CMDT: 1004-1015<br>Harrison's:3068-3095; 122-129<br><br><b>Quiz # 11</b>   |
| 12   | Peripheral Nerve Disorders – Carpal Tunnel Syndrome, CRPS, Guillain-Barre Syndrome, Peripheral Neuropathy, ALS<br>Closed Head Injuries – Concussion, Postconcussion<br>Syndrome, Traumatic Brain Injury | CMDT: 1704-1705 Harrison's: 2618-2619<br>CMDT: 888-889 Harrison's: 68, 2644, 3165 Griffin: 5, 34-38, 134, 339<br>CMDT: 1048, 1051 Harrison's: 3225-3230<br>CMDT: 1047-1058<br>Harrison's: 3204-3225, 3141-3148<br>CMDT: 1042-1044<br>Harrison's: 3183-3188<br><b>Quiz # 12</b> |
| 13   | Review for finals   | <b>Quiz # 13</b>   |
| 14   | Finals  | <b>Final Examination</b>   |
| 15   | Remediation   |  |

## ARC-PA Standards that Pertain to this Course

The Accreditation Review Commission on Education for the Physician Assistant is the accrediting agency that protects the interests of the public and physician assistant profession by defining the standards for physician assistant education and evaluating physician assistant educational programs within the territorial United States to ensure their compliance with those standards. The ARC-PA Standards, 4<sup>th</sup> ed. that are relevant to this course are listed below:

4<sup>th</sup> Ed. ARC-PA Standards (<http://www.arc-pa.org/accreditation/standards-of-accreditation/>)

- B1.01 – The curriculum *must* be consistent with the mission and goals of the program.
- B1.02 – The curriculum must include core knowledge about the established and evolving biomedical and clinical sciences and the application of this knowledge to patient care.
- B1.03 – The curriculum must be of sufficient breadth and depth to prepare the student for the clinical practice of medicine.
- B1.04 – The curriculum design *must* reflect sequencing that enables students to develop the *competencies* necessary for current and evolving clinical practice.
- B1.05 – The curriculum *must* include instruction about intellectual honesty and appropriate academic and professional conduct.
- B1.06 – The curriculum *must* include instruction to prepare students to provide medical care to patients from diverse populations.
- B1.07 – The curriculum *must* include instruction related to the development of problem solving and medical decision-making skills.
- B1.09 – For each didactic and clinical course, the program *must* define and publish *instructional objectives* that guide student acquisition of required *competencies*.
- B2.02 (c,d,e) – The program *must* include instruction in the following areas of applied medical sciences and their application in clinical practice:
  - a.) anatomy
  - b.) physiology
  - (c) pathophysiology
  - (d) pharmacology and pharmacotherapeutics
  - (e) the genetic and molecular mechanisms of health and disease.
- B2.03 – The program curriculum *must* include instruction in clinical medicine covering all organ systems.
- B2.05 – The program curriculum *must* include instruction in the patient evaluation, diagnosis, and management.
- B2.06 – The program curriculum *must* include instruction in the provision of clinical medical care across the life span.
- B2.07 The program curriculum must include instruction in technical skills and procedures based on current professional practice.
- B2.08 – The program curriculum *must* include instruction in the social and behavioral sciences as well as normal and abnormal development across the life span.
- B2.09 – The program curriculum *must* include instruction in basic counseling and patient education skills.
- B2.10 – The program curriculum *must* include instruction to prepare students to search, interpret and evaluate the medical literature, including its application to individualized patient care.
- B2.13 – The program curriculum *must* include instruction in patient safety, quality improvement, prevention of medical error, and risk management.
- B2.16 – The program curriculum must include instruction in the principles and practice of



medical ethics.

## **MUPA Competencies Relevant to this Course**

### **Medical Knowledge (MK)**

Graduates will demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care. Graduates will apply the ability to use evidence based medicine, and be able to synthesize areas of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention to care for patients across the life span in culturally diverse populations and rural areas.

### **Interpersonal & Communication Skills (ICS)**

Graduates will employ skills to work in inter-professional teams that will result in effective communication with patients, other health care professionals, and patient families. Graduates will be able to accurately document information they obtain with respect to medical, financial, legal, and accuracy purposes.

### **Patient Care (PC)**

Graduates will demonstrate the ability to make decisions about diagnostic and therapeutic interventions based on patient preferences, current scientific evidence and informed clinical judgement. Graduates will be able to aim health services for patients on disease prevention, health maintenance and patient and family education.

### **Professionalism (P)**

Graduates will demonstrate commitment to excellence in professional relationships and ongoing professional development (including lifelong learning). Physician assistants are expected to have a firm understanding of legal and regulatory requirements as well as the appropriate role of physician assistants in health care.

### **Practice-based Learning & Improvement (PB&L)**

Graduates will demonstrate the ability to critically analyze their practice in light of their experience, the medical literature and their own self-analysis and self-improvement.

### **Systems-based Practice (SBP)**

Graduates will be prepared to practice cost effective health care and resource allocation that does not compromise patient care. Graduates will be able to discuss ways to partner with supervising/collaborating physicians and other health care professionals to improve the delivery and effectiveness of health care and patient outcomes.

## **University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/policies/). (URL: <http://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy

- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Marshall University E-Mail Accounts and Technology Assistance

You must have and use your MU email account. Your personal email accounts will not be used for official communication with Marshall University programs and personnel. You may redirect your MU email to your own personal email account, but you must sign in to your MU account to do that. Marshall University uses Office 365 email. For more information, visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: <https://www.marshall.edu/it/office365/>).

For computer and browser requirements, see “Get Connected” and “Internet Browser” at [Student Resources: First Steps](#). See also [IT: Recommended Hardware](#) (URLs: <http://www.marshall.edu/muonline/student-resources/> and <http://www.marshall.edu/it/recommendations/>). To check your browsers, use the [Blackboard Browser Checker](#) and ensure that you set permissions properly and have all the necessary plug-ins. (URL: [https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support/BrowserChecker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker) )

- Students must be able to use Marshall Email, as well as the following tools in Blackboard: course messages, assignments, discussion board forums, tests, blogs, journals, wikis, and groups. Links to Blackboard Help and tutorials are available on the Start Here page and on the Tech Support tab in Blackboard. [Adobe Acrobat Reader](#) may be needed to read some files. This plug-in is available free. (URL: <https://get.adobe.com/reader/> ) See the Tech Support tab in Blackboard for additional information and links.
- Students may be required to submit assignments as Microsoft Word documents (.docx), using the most recent Microsoft Office suite. Office 365 is available at no extra charge to students enrolled at MU. For information visit [Marshall IT: Office 365](#) (URL: <http://www.marshall.edu/it/office365/> ).
- See the Tech Support tab in Blackboard for additional information on browsers, technology, and apps.

If you have technical problems, please contact one or more of the following:

- [Blackboard Support Center](#) (URL: <http://marshall.edusupportcenter.com> )
- [Marshall Information Technology \(IT\) Service Desk](#) (Help Desk) (URL: <http://www.marshall.edu/it/departments/it-service-desk/> )  
Huntington: (304) 696-3200
- [Email the IT Service Desk](#) ([itservicedesk@marshall.edu](mailto:itservicedesk@marshall.edu) )

## Technology and Technical Skill Requirement

- Students must be proficient in the use of computers, the Internet, browsers, Microsoft Office Word, and other common applications.

## Course & Faculty Evaluations

Policy Statement Regarding Student Compliance with Course Evaluations: The Physician Assistant Program at Marshall University has a process to assess all aspects of the program. It is important to gain information from our PA students. By implementing a systematic method of collecting student



feedback, appropriate PA program faculty, the Program Director, the Curriculum Committee and the Self-Assessment Committee are able to carefully review and respond to student course ratings to identify strengths and weaknesses and promote positive curricular change. Therefore, students are required to complete evaluations of all courses and rotations and their associated faculty/ preceptors. Students who do not to complete course/rotation evaluations within the established timeframe will receive one warning of the penalties for non-compliance. If the student still has not completed the evaluations within 48 hours of the warning, they will have written warning submitted to the Student Progress Committee for possible inclusion as part of their academic record. The PA Program also recognizes that repeated noncompliance is an issue of professional conduct. If noncompliance occurs in subsequent courses, the student will be required to meet with the Student Progress Committee.

### **Modifications in Course Syllabus Disclaimer**

Every attempt has been made to provide a complete syllabus that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs and experiences of the students.

## Bibliography

Coolen, T., Ducene, C., Horoi, M., & Thill, M.-P. (2019). Two cases of pulsatile tinnitus: Key points for the clinician. *European Annals of Otorhinolaryngology, Head and Neck Diseases*, 136, S53-S55. doi:10.1016/j.anorl.2018.09.009

Gupta, A.K., & Stec, N. (2019). Recent advances in therapies for onychomycosis and its management. *F1000 Research*, 8, 968. doi:10.12688/f1000research.18646.1

Mandl, L.A. (2019). Osteoarthritis year in review 2018: clinical. *Osteoarthritis and Cartilage*, 27, 359-364. doi:10.1016/j.joca.2018.11.001

Buesa-Estellez, A., Cano-de-la-Cuerda, R., Ortiz-Gutierrez, R.M., & Palacios-Cena, D. (2019). The impact of pharmacological treatment on patients with multiple sclerosis. *Disability and Health Journal*. doi:10.1016/j.dhjo.2019.05.005

Coles, A.J., Helmy, A., Jones, J.L., Menon, D.K., Needham, E.J., & Zanier, E.R. (2019). The immunological response to traumatic brain injury. *Journal of Neuroimmunology*, 332, 112-125. doi:10.1016/j.jneuroim.2019.04.005

**Request for Graduate Course Addition**

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: School of MedicineDept/Division: PA ProgramAlpha Designator/Number: PAS 601☒ Graded ☐ CR/NCContact Person: Ginger Boles, MS PA-CPhone: 304-629-1341**NEW COURSE DATA:**New Course Title: Pharmacology for the PA I

Alpha Designator/Number:

|   |   |   |  |   |   |   |  |  |  |
|---|---|---|--|---|---|---|--|--|--|
| P | A | S |  | 6 | 0 | 1 |  |  |  |
|---|---|---|--|---|---|---|--|--|--|

Title Abbreviation:

|   |   |   |   |   |   |   |   |   |   |   |   |  |   |   |   |  |   |   |   |  |   |   |  |   |
|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|--|---|---|---|--|---|---|--|---|
| P | h | a | r | m | a | c | o | l | o | g | y |  | f | o | r |  | t | h | e |  | P | A |  | I |
|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|--|---|---|---|--|---|---|--|---|

(Limit of 25 characters and spaces)

Course Catalog Description:  
(Limit of 30 words)

Aligning with the topics in Clinical Medicine I, this course applies pharmacologic and pharmacotherapeutic principles to the treatments of diseases and disorders studied.

Co-requisite(s): PAS 600,602,603,604,605,606First Term to be Offered: Summer 2021Prerequisite(s): Completion of First SemesterCredit Hours: TwoCourse(s) being deleted in place of this addition (must submit course deletion form): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head

Ginger Boles MS-PA-C

Date

8-20-19

Registrar

Sonyia Y C G510912

Date

8-21-19

College Curriculum Chair

Sean Linder

Date

8/26/19

Graduate Council Chair

Lauri Howard

Date

10/1/19

## Request for Graduate Course Addition - Page 2

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College: School of Medicine

Department/Division: PA Program

Alpha Designator/Number: PAS 601

---

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Course will be taught by Faculty in the PA program and/ or School of Medicine

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

N/A

Course duplication was addressed in the Addition of Degree application

3. REQUIRED COURSE: If this course will be required by another department(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

N/A

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

N/A

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable.

Course will be taught by faculty in the PA program and/or School of Medicine

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See attached

## **Request for Graduate Course Addition - Page 3**

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**7. COURSE OUTLINE** (May be submitted as a separate document)

See attached

**8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES** (May be submitted as a separate document)

See Attached

**9. EXAMPLE OF INSTRUCTIONAL METHODS** (Lecture, lab, internship)

See Attached



## **Request for Graduate Course Addition - Page 4**

10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)

See Attached

11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE

N/A

12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)

See attached

## Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Course Number and Title:

Catalog Description:

Prerequisites:

First Term Offered:

Credit Hours:

Department: Physician Assistant Program

Course Number and Title: PAS 601 Pharmacology for the PA I

Catalog Description: Aligning with the topics in Clinical Medicine I, this course applies pharmacologic and pharmacotherapeutic principles to the treatments of diseases and disorders studied.

First Term Offered: Summer 2021

Credit Hours: Two



## **MUPA Program Pharmacology for the PA I – PAS 601 Course Syllabus**

### **Course Description**

Aligning with the topics in Clinical Medicine I, this course applies pharmacologic and pharmacotherapeutic principles to the treatments of diseases and disorders studied.

### **Credits**

Two (2) credit hours

### **Prerequisites**

Successful completion of the first semester of the Marshall University Physician Assistant Program.

### **Course Goals**

- Gain a thorough comprehension of the pharmacologic principles for each class, including specific drugs, as to be able to develop an effective and safe therapeutic plan for patients with diseases and disorders affecting the dermatologic, ENOT, musculoskeletal, and neurologic systems.
- Understand the indications, drug action, and mechanism of action, pharmacokinetics, adverse effects, contraindications, and drug interactions for each drug class, including specific drugs within each class.
- Understand how this medical knowledge relates to clinical vignettes and learn to justify a proposed pharmacologic treatment plan based on analysis of benefits versus risks to the patient.

### **Term/Year**

Summer Term 2021

### **Class Meeting Days/Times**

TBA

### **Location**

TBA

### **Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/>).

## Course Director

Jaclyn Kiser, MS PA-C

Office TBA

Office hours TBA

Office phone (304) 691-1854

Email: [kiserj@marshall.edu](mailto:kiserj@marshall.edu)

## Course Instructors

TBA

## Required Texts and Materials

DiPiro, J.T., Ellingrod, V., Haines, S.T., Nolin, T.D., Posey, M., & Yee G.C. (Eds.). (2019).

*Pharmacotherapy: A pathophysiologic approach, 11 ed.* New York, NY: McGraw-Hill.

## Recommended/Optional Texts and Materials

<https://www.uptodate.com>

\*The Marshall University PA program has an online database of textbooks available to the students. The website for the online database is <http://accessmedicine.mhmedical.com>. Most textbooks used throughout the program can be found on the Access Medicine website.

## Attire

Per Marshall University Physician Assistant Program Policy.

## Attendance/Participation Policy

Attendance is vital to understanding course content. It is mandatory for all lectures/clinical labs, and is a reflection of your commitment, dedication, and work ethic. Requests for excused absences must be submitted to the course director via email as soon as the circumstance arises. Failure to attend may affect your grade or require discussion with the course director.

## Course Requirements

- Students are expected to attend and be on time for all scheduled lectures and learning activities.
- Students are expected to participate in all activities.
- Students are expected to be prepared for each lecture/learning activity by reading all assignments prior to the scheduled lecture/activity.
- Students are expected to clean up work area prior to leaving the classroom or laboratory.
- Completion of course & faculty evaluations. (see policy statement at the end of this syllabus)

## Methodologies of Teaching and Student Assessment

Student attainment of expected learning outcomes will be practiced and achieved using various instructional and learning methods including; lecture, in-class discussion, independent learning, and/or video/audio/graphic illustrations. This is subject to variation throughout the course based upon instructor preferences and the needs of the students. Student achievement of learning outcomes will be assessed using; quizzes, examinations, assignments, and a cumulative final examination.

\*The final grade will be determined by earned points/total points. \*

| Component              | % of Final Grade |
|------------------------|------------------|
| Examinations           | 50%              |
| Final Examination      | 20%              |
| Quizzes                | 20%              |
| Assignments            | 5%               |
| Professionalism Rubric | 5%               |

Per the MUPA program policy, the following grading scale applies:

A – 89.5 - 100%

B – 79.5 - 89.4%

C – 69.5 - 79.4%

F – < 69.4 %

### Student Learning Outcomes, Competencies, and Instructional Objectives

| Student Learning Outcomes<br>Upon successful completion of this course, PA students will be able to:   | ARC-PA Standards/<br>Competencies | Instructional Objectives<br>Upon successful completion of this course, PA students will be able to:  |
|--|-----------------------------------|--|
| Discuss the indications, drug action, mechanism of action, pharmacokinetics, adverse effects, contraindications, and drug interactions for each drug class, including specific drugs within each class for diseases and disorders involving the skin, eyes, ears, nose, throat, musculoskeletal, and neurologic systems. | B1.02, B2.02(d) (MK)              | <ul style="list-style-type: none"> <li>Identify a drug class/specific drug within a class as indicated in the treatment of the diseases and disorders studied per organ system.</li> <li>Describe the clinical effect a drug is expected to have when administered.</li> <li>Associate drugs and drug classes with their mechanisms of action.</li> <li>Detail factors that could affect the clinical effectiveness of a drug in a given patient population.</li> <li>Describe the clinically relevant side effects of a drug/drug class that could adversely affect the health of the patient.</li> <li>Express circumstances in which a drug should not be administered to a certain patient population due to a significantly increased risk of adverse effects.</li> <li>Identify possible interactions with other concomitantly administered drugs that might affect the clinical efficacy, bioavailability, or toxicity of either drug.</li> </ul> |



| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to:  | <b>ARC-PA Standards/<br/>Competencies</b>                           | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|--|---|---|
| Apply knowledge of specific drugs and drug classes used to treat conditions of the skin, eyes, ears, nose, throat, musculoskeletal, and neurologic systems to a clinical vignette to develop a safe and effective therapeutic patient care plan. | B1.02, B1.05, B1.07, B2.02(d), B2.05, B2.09, B2.13, (MK), (PC), (P) | <ul style="list-style-type: none"> <li>Given a clinical vignette that includes all pertinent history, physical examination findings, and diagnostic studies, choose the most appropriate treatment plan.</li> <li>Prepare an argument based on a benefits versus risks analysis as to why you would or would not choose a specific drug for treatment of any of the disorders studied.</li> <li>Detail the causes of medications errors, their prevalence, and best practices to avoid them.</li> <li>Structure a typical written prescription correctly using current accepted nomenclature and best practices to prevent alterations to the form.</li> <li>Describe effective patient education and counseling techniques to increase compliance with treatment regimen.</li> </ul> |

### Course Content and Assignments

| <b>Week</b> | <b>Topics</b>  | <b>Activity/Assignment</b>   |
|-------------|--|--|
| 1           | Introduction to Course<br>How to write a prescription<br>Common abbreviations  | Assignment – Write prescriptions for 10 different medications using correct nomenclature and abbreviations |
| 2           | Drugs and drug classes used to treat atopic dermatitis, pityriasis rosea, lichen planus, seborrheic dermatitis, psoriasis, and actinic keratosis | Quiz # 1   |
| 3           | Drugs used to treat bacterial, fungal, viral, and parasitic infections of the skin and nails, pediculosis, other arthropods, urticaria           | Quiz # 2<br><br>Exam # 1   |

| Week | Topics  | Activity/Assignments                               |
|------|---|--|
| 4    | Topical ophthalmic agents, treatment for acute angle-closure glaucoma, corneal abrasion.  | Quiz # 3   |
| 5    | Treatment with otic antibiotics with and without corticosteroids, and for acute otitis media, tinnitus, acute vertigo attacks and chronic management including other vestibular disorders | Quiz # 4   |
| 6    | Drugs used to treat the common cold, acute bacterial rhinosinusitis, allergic rhinitis, oral candidiasis, pharyngitis & tonsillitis (GABH)  | Quiz # 5<br>Exam # 2                               |
| 7    | NSAIDS  | Quiz # 6   |
| 8    | COX-2 Inhibitors, Acetaminophen   | Quiz # 7   |
| 9    | DMARDS, IA injection solutions  | Quiz # 8   |
| 10   | Treatment of headache, migraine, facial pain (trigeminal and atypical neuralgia, neuropathies   | Quiz # 9<br>Exam # 3                               |
| 11   | Tourette Syndrome, Bell Palsy, Duchenne muscular dystrophy  | Quiz # 10  |
| 12   | Drugs used in Parkinson Disease   | Quiz # 11  |
| 13   | Review  | Drug toxicity, MEs and ADEs assignment<br>Exam # 4 |
| 14   | Finals  | Final Exam   |
| 15   | Remediation   |  |

### ARC-PA Standards that Pertain to this Course

The Accreditation Review Commission on Education for the Physician Assistant is the accrediting agency that protects the interests of the public and physician assistant profession by defining the standards for physician assistant education and evaluating physician assistant educational programs within the territorial United States to ensure their compliance with those standards. The ARC-PA Standards, 4<sup>th</sup> ed. that are relevant to this course are listed below:

4<sup>th</sup> Ed. ARC-PA Standards (<http://www.arc-pa.org/accreditation/standards-of-accreditation/>)

- B1.01 – The curriculum must be consistent with the mission and goals of the program.
- B1.02 – The curriculum must include core knowledge about the established and evolving biomedical and clinical sciences and the application of this knowledge to patient care.
- B1.04 – The curriculum design must reflect sequencing that enables students to develop the competencies necessary for current and evolving clinical practice.
- B1.05 – The curriculum must include instruction about intellectual honesty and appropriate

academic and professional conduct.

- B1.07 – The curriculum must include instruction related to the development of problem solving and medical decision-making skills.
- B2.02(d) – The program must include instruction in the following areas of applied medical sciences and their application in clinical practice:
  - a.) anatomy
  - b.) physiology
  - c.) pathophysiology
  - d.) pharmacology and pharmacotherapeutics
  - e.) the genetic and molecular mechanisms of health and disease.
- B2.03 – The curriculum must include instruction in clinical medicine covering all organ systems.
- B2.05 – The program curriculum must include instruction in patient evaluation, diagnosis, and management.
- B2.09 – The program curriculum must include instruction in basic counseling and patient education skills.
- B2.13 – The program curriculum must include instruction in patient safety, quality, improvement, prevention of medical errors, and risk management.

## **MUPA Competencies Relevant to this Course**

### **Medical Knowledge (MK)**

Graduates will demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care. Graduates will apply the ability to use evidence based medicine, and be able to synthesize areas of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention to care for patients across the life span in culturally diverse populations and rural areas.

### **Interpersonal & Communication Skills**

Graduates will employ skills to work in interprofessional teams that will result in effective communication with patients, other health care professionals, and patient families. Graduates will be able to accurately document information they obtain with respect to medical, financial, legal, and accuracy purposes.

### **Patient Care**

Graduates will demonstrate the ability to make decisions about diagnostic and therapeutic interventions based on patient preferences, current scientific evidence and informed clinical judgement. Graduates will be able to aim health services for patients on disease prevention, health maintenance and patient and family education.

### **Professionalism**

Graduates will demonstrate commitment to excellence in professional relationships and ongoing professional development (including lifelong learning). Physician assistants are expected to have a firm understanding of legal and regulatory requirements as well as the appropriate role of physician assistants in health care.



## University Policies

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/policies/). (URL: <http://www.marshall.edu/academic-affairs/policies/>)

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Marshall University E-Mail Accounts and Technology Assistance

You must have and use your MU email account. Your personal email accounts will not be used for official communication with Marshall University programs and personnel. You may redirect your MU email to your own personal email account, but you must sign in to your MU account to do that. Marshall University uses Office 365 email. For more information, visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: <https://www.marshall.edu/it/office365/>).

For computer and browser requirements, see "Get Connected" and "Internet Browser" at [Student Resources: First Steps](http://www.marshall.edu/muonline/student-resources/). See also [IT: Recommended Hardware](http://www.marshall.edu/it/recommendations/) (URLs: <http://www.marshall.edu/muonline/student-resources/> and <http://www.marshall.edu/it/recommendations/>). To check your browsers, use the [Blackboard Browser Checker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker) and ensure that you set permissions properly and have all the necessary plug-ins. (URL: [https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support/BrowserChecker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker))

- Students must be able to use Marshall Email, as well as the following tools in Blackboard: course messages, assignments, discussion board forums, tests, blogs, journals, wikis, and groups. Links to Blackboard Help and tutorials are available on the Start Here page and on the Tech Support tab in Blackboard. [Adobe Acrobat Reader](https://get.adobe.com/reader/) may be needed to read some files. This plug-in is available free. (URL: <https://get.adobe.com/reader/>) See the Tech Support tab in Blackboard for additional information and links.
- Students may be required to submit assignments as Microsoft Word documents (.docx), using the most recent Microsoft Office suite. Office 365 is available at no extra charge to students enrolled at MU. For information visit [Marshall IT: Office 365](https://www.marshall.edu/it/office365/) (URL: [http://www.marshall.edu/it/office365/](https://www.marshall.edu/it/office365/)).
- See the Tech Support tab in Blackboard for additional information on browsers, technology, and apps.

If you have technical problems, please contact one or more of the following:

- [Blackboard Support Center](http://marshall.edusupportcenter.com) (URL: <http://marshall.edusupportcenter.com> )
- [Marshall Information Technology \(IT\) Service Desk](http://www.marshall.edu/it/departments/it-service-desk/) (Help Desk) (URL: <http://www.marshall.edu/it/departments/it-service-desk/>)  
Huntington: (304) 696-3200
- [Email the IT Service Desk](mailto:itservicedesk@marshall.edu) ([itservicedesk@marshall.edu](mailto:itservicedesk@marshall.edu) )

## Technology and Technical Skill Requirement

- Students must be proficient in the use of computers, the Internet, browsers, Microsoft Office Word, and other common applications.

## Course & Faculty Evaluations

Policy Statement Regarding Student Compliance with Course Evaluations: The Physician Assistant Program at Marshall University has a process to assess all aspects of the program. It is important to gain information from our PA students. By implementing a systematic method of collecting student feedback, appropriate PA program faculty, the Program Director, the Curriculum Committee and the Self-Assessment Committee are able to carefully review and respond to student course ratings to identify strengths and weaknesses and promote positive curricular change. Therefore, students are required to complete evaluations of all courses and rotations and their associated faculty/ preceptors. Students who do not to complete course/rotation evaluations within the established timeframe will receive one warning of the penalties for non-compliance. If the student still has not completed the evaluations within 48 hours of the warning, they will have written warning submitted to the Student Progress Committee for possible inclusion as part of their academic record. The PA Program also recognizes that repeated noncompliance is an issue of professional conduct. If noncompliance occurs in subsequent courses, the student will be required to meet with the Student Progress Committee.

## Modifications in Course Syllabus Disclaimer

Every attempt has been made to provide a complete syllabus that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs and experiences of the students.



## Bibliography

Armstrong, A.W., Bagel, J., Robertson, A.D., Van Voorhees, A.S., & Yamauchi, P.S. (2015). Combining biologic therapies with other systemic treatments in psoriasis: Evidence-based, best-practice recommendations from the medical board of the national psoriasis foundation. *JAMA dermatol.*, 151(4), 432-438. doi:10.1001/jamadermatol.2014.3456

Bhutta, M.F., Casselbrant, M.L., Coates, H., Gisselsson-Solen, M., Hall, A.J., Mandel, E.M., et al. (2017). Panel 7: Otitis media: Treatment and complications. *Otolaryngology – head and neck surgery*, 156(4S), S88-S105. doi:10.1177/0194599816633697

Costa, B.R., Juni, P., Keller, N., Nartey, L., Reichenbach, S., Trelle, S., & Wandel, S. (2017). Effectiveness of non-steroidal anti-inflammatory drugs for the treatment of pain in knee and hip osteoarthritis: A network meta-analysis. *Lancet*, 390, e21-e33. Retrieved from <https://www.thelancet.com>

Grimes, P.E., Ijaz, S., Kwak, D., & Nashawati, R. (2019). New oral and topical approaches for the treatment of melisma. *International journal of women's dermatology*, 5, 30-36. doi:10.1016/j.ijwd.2018.09.004

Harris, A.M., Hicks, L.A., & Qaseem, A. (2016). Appropriate antibiotic use for acute respiratory tract infection in adults: Advice for high-value care from the American College of Physicians and the Centers for Disease Control and Prevention. *Annals of internal medicine*, 164, 425-434. doi:10.7326/M15-1840

**Request for Graduate Course Addition**

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: School of Medicine

Dept/Division: PA Program

Alpha Designator/Number: PAS 602

☒ Graded ☐ CR/NC

Contact Person: Ginger Boles, MS PA-C

Phone: 304-629-1341

**NEW COURSE DATA:**

New Course Title: Clinical Concepts I

Alpha Designator/Number:

P A S 6 0 2

Title Abbreviation:

C l i n i c a l C o n c e p t s I

(Limit of 25 characters and spaces)

Course Catalog Description:  
(Limit of 30 words)

Aligning with the topics in Clinical Medicine I, the course deepens knowledge by developing clinical decision making and problem -solving skills in a case-based format.

Co-requisite(s): PAS 600,601,603,604,605,606

First Term to be Offered: Summer 2021

Prerequisite(s): Completion of First Semester

Credit Hours: Two

Course(s) being deleted in place of this addition (must submit course deletion form): none

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

Dept. Chair/Division Head

Date

Registrar

Date

College Curriculum Chair

Date

Graduate Council Chair

Date

## Request for Graduate Course Addition - Page 2

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College: School of Medicine

Department/Division: PA Program

Alpha Designator/Number: PAS 602

---

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. FACULTY: Identify by name the faculty in your department/division who may teach this course.

Course will be taught by Faculty in the PA program and/ or School of Medicine

2. DUPLICATION: If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the proposal. Enter "**Not Applicable**" if not applicable.

N/A

Course duplication was addressed in the Addition of Degree application

3. REQUIRED COURSE: If this course will be required by another department(s), identify it/them by name. Enter "**Not Applicable**" if not applicable.

N/A

4. AGREEMENTS: If there are any agreements required to provide clinical experiences, attach the details and the signed agreement. Enter "**Not Applicable**" if not applicable.

N/A

5. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials to teach this course, attach an estimate of the time and money required to secure these items. (Note: Approval of this form does not imply approval for additional resources.) Enter "**Not Applicable**" if not applicable.

Course will be taught by faculty in the PA program and/or School of Medicine

6. COURSE OBJECTIVES: (May be submitted as a separate document)

See attached

## **Request for Graduate Course Addition - Page 3**

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**7. COURSE OUTLINE (May be submitted as a separate document)**

See attached

**8. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATES (May be submitted as a separate document)**

See Attached

**9. EXAMPLE OF INSTRUCTIONAL METHODS (Lecture, lab, internship)**

See Attached

## **Request for Graduate Course Addition - Page 4**

### **10. EXAMPLE EVALUATION METHODS (CHAPTER, MIDTERM, FINAL, PROJECTS, ETC.)**

See Attached

### **11. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE/GRADUATE COURSE**

N/A

### **12. PROVIDE COMPLETE BIBLIOGRAPHY (May be submitted as a separate document)**

See attached



## Request for Graduate Course Addition - Page 5

Please insert in the text box below your course summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Course Number and Title:

Catalog Description:

Prerequisites:

First Term Offered:

Credit Hours:

Department: Physician Assistant Program

Course Number and Title: PAS 602 Clinical Concepts I

Catalog Description: Aligning with the topics in Clinical Medicine I, the course deepens knowledge by developing clinical decision making and problem -solving skills in a case-based format.

First Term Offered: Summer 2021

Credit Hours: Two



PHYSICIAN ASSISTANT PROGRAM

## **MUPA Program Clinical Concepts I – PAS 602 Course Syllabus**

### **Course Description**

Aligning with the topics in Clinical Medicine I, this course applies pharmacologic and pharmacotherapeutic principles to the treatments of diseases and disorders studied.

### **Credits**

Two (2) credit hours

### **Prerequisites**

Successful completion of the first semester of the Marshall University Physician Assistant Program

### **Course Goals**

- Progression, development, and refinement of critical thinking, problem solving, and medical decision-making skills.
- Work effectively in collaborative teams, and interprofessional patient centered teams with continued improvement in communication skills and professionalism competencies.
- Growth in understanding of medical knowledge, and its applications to patients from diverse populations, applied across the lifespan.
- Continued critical appraisal of personal abilities leading to self-directed learning, and practice based improvement.

### **Term/Year**

Summer Term 2021

### **Class Meeting Days/Times**

TBA

### **Location**

TBA

### **Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/>).

## Course Director/Instructor

Jaclyn Kiser, PA-C

Office: TBA

Office Hours: TBA

Office Phone: (304) 691-1854

Email: [kiserj@marshall.edu](mailto:kiserj@marshall.edu)

## Required Texts and Materials

Asprey, D.P., & Dehn, R. (2013). *Essential clinical procedures, 3rd ed.* Philadelphia, PA: Saunders, Elsevier.

Bickley, L.S., Szilagy, P.G., *Bates' guide to physical examination and history taking, 12<sup>th</sup> ed.* Philadelphia, PA: Lippincott Williams and Wilkins.

Chen, M.Y.M., Ott, D.J., & Pope, T.L. (2011). *Basic radiology, 2nd ed.* New York, NY: McGraw-Hill.

Fauci, A.S., Hauser, S.L., Jameson, J.L., Kasper, D.L., Longo, D.L., & Loscalzo, J. (2016). *Harrison's manual of medicine, 19th ed.* New York, NY: McGraw-Hill.

Fielding, A., & Lebowitz, H. (Eds.) (2019). *Current medical diagnosis & treatment, 58th ed.* New York, NY: McGraw-Hill.

## Recommended/Optional Texts and Materials

Griffin, L.Y. (Ed.). (2005). *Essentials of musculoskeletal care, 5th ed.* Rosemont, IL: American Academy of Orthopaedic Surgeons.

Jameson, J.L. (Ed.). (2018). *Harrison's principles of internal medicine, 20th ed.* New York, NY: McGraw-Hill.

\*The Marshall University PA program has an online database of textbooks available to the students. The website for the online database is <http://accessmedicine.mhmedical.com>. Most textbooks used throughout the program can be found on the Access Medicine website.

## Attire

Per the Marshall University Physician Assistant Program Policy.

## Attendance/Participation Policy

Attendance is vital to understanding course content. It is mandatory for all lectures/clinical labs, and is a reflection of your commitment, dedication, and work ethic. Requests for excused absences must be submitted to the course director via email as soon as the circumstance arises. Failure to attend may affect your grade or require discussion with the course director.

## Course Requirements

- Students are expected to attend and be on time for all scheduled lectures and learning activities.
- Students are expected to participate in all activities.
- Students are expected to be prepared for each lecture/learning activity by reading all assignments prior to the scheduled lecture/activity.

- Students are expected to clean up work area prior to leaving the classroom or laboratory.
- Completion of course & faculty evaluations. (see policy statement at the end of this syllabus)

### Methodologies of Teaching and Student Assessment

Student attainment of expected learning outcomes will be practiced and achieved using various instructional and learning methods including; lecture, in-class discussion, independent learning, various active learning modalities, and/or video/audio/graphic illustrations. This is subject to variation throughout the course based upon instructor preferences and the needs of the students. Student achievement of learning outcomes will be assessed using; quizzes, examinations, a cumulative final examination, and a practice-based learning & improvement journal.

\*The final grade will be determined by earned points/total points. \*

| Component                  | % of Final Grade |
|----------------------------|------------------|
| Examinations               | 40%              |
| Final Examination          | 20%              |
| Active Learning Activities | 25%              |
| PBL&I Journal              | 10%              |
| Professionalism Rubric     | 5%               |

Per the MUPA program policy, the following grading scale applies:

- A – 89.5 - 100%
- B – 79.5 - 89.4%
- C – 69.5 - 79.4%
- F – < 69.4 %



## Student Learning Outcomes, Competencies, and Instructional Objectives

| <b>Student Learning Outcomes</b><br>Upon successful completion of this course, PA students will be able to:   | <b>ARC-PA Standards/<br/>Competencies</b>                                       | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|---|---|---|
| Evaluate a clinical vignette to develop the best plan for patient care involving conditions across the lifespan of the skin, eyes, ears, nose, throat, musculoskeletal, and nervous systems.              | B1.02, B1.03, B1.04, B1.07, B2.03, B2.05, B2.06, B2.09, B2.13 (MK), (PC), (SBP) | <ul style="list-style-type: none"> <li>• Choose the most appropriate diagnostic method for patients with conditions within listed systems based on patient presentation, evidence based practice guidelines, cost effectiveness, sensitivity, specificity, and patient preferences.</li> <li>• Evaluate and interpret diagnostic data.</li> <li>• Formulate a differential diagnosis.</li> <li>• Recommend standard of care treatment plan when given an appropriate clinical vignette.</li> <li>• Propose an appropriate follow up schedule for a patient with given diagnosis.</li> <li>• Evaluate the efficacy of therapeutic management of disease.</li> <li>• Demonstrate culturally sensitive, patient centered education and counseling skills.</li> </ul> |
| Empathize with other students, fostering a constructive and positive learning environment, and participate fully during in-class activities.  | B1.05, B1.08, B2.04, (ICS), (P)   | <ul style="list-style-type: none"> <li>• Motivate others to do their best work.</li> <li>• Criticize constructively if an error is evident.</li> <li>• Engage in discussions during class.</li> <li>• Persevere through challenging situations to solve problems.</li> </ul>  |
| Actively persist in critical analysis of one's own conclusions in regards to medical knowledge, the medical literature, and other information resources for the purpose of self-and practice-improvement. | B1.08, B2.04, B2.10 (PBL)   | <ul style="list-style-type: none"> <li>• Assess own knowledge in concert with other members of the class.</li> <li>• Research evidence from scientific studies related to diseases within any given unit of study.</li> <li>• Recommend information technology resources available to support one's own education.</li> <li>• Resolve personal biases and gaps in medical knowledge.</li> </ul>   |



| <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  | <b>ARC-PA Standards/ Competencies</b>   | <b>Instructional Objectives</b><br>Upon successful completion of this course, PA students will be able to:  |
|---|---|---|
| Evaluate a clinical vignette to develop the best plan for patient care involving conditions across the lifespan of the skin, eyes, ears, nose, throat, musculoskeletal, and nervous systems.              | B1.02, B1.03, B1.04, B1.07, B2.03, B2.05, B2.06, B2.09, B2.13 (MK), (PC), (SBP) | <ul style="list-style-type: none"> <li>• Correlate pertinent historical data and physical examination findings, along with evidence based practice guidelines, taking into account sensitivity, specificity, cost-effectiveness, and patient preferences, to choose the most appropriate diagnostic method for patients with conditions in listed systems.</li> <li>• Evaluate and interpret diagnostic information.</li> <li>• Formulate a differential diagnosis.</li> <li>• Recommend standard of care treatment plan, taking into consideration the history and physical exam, and any evaluation/diagnostic method results.</li> <li>• Propose an appropriate follow up schedule for a patient with given diagnosis.</li> <li>• Evaluate the efficacy of therapeutic management of disease.</li> <li>• Demonstrate culturally sensitive, patient centered education and counseling skills</li> </ul> |
| Empathize with other students, fostering a constructive and positive learning environment, and participate fully during in-class activities.  | B1.05, B1.08, B2.04, (ICS), (P)   | <ul style="list-style-type: none"> <li>• Motivate others to do their best work.</li> <li>• Criticize constructively if an error is evident.</li> <li>• Engage in discussions during class.</li> <li>• Persevere through challenging situations to solve problems</li> </ul>   |
| Actively persist in critical analysis of one's own conclusions in regards to medical knowledge, the medical literature, and other information resources for the purpose of self-and practice-improvement. | B1.08, B2.04, B2.10 (PBL)   | <ul style="list-style-type: none"> <li>• Assess own knowledge in concert with other members of the class.</li> <li>• Research evidence from scientific studies related to diseases within any given unit of study.</li> <li>• Recommend information technology resources available to support one's own education.</li> <li>• Resolve personal biases and gaps in medical knowledge.</li> </ul>   |

### Course Content and Assignments

| Week | Topics  | Activity/Assignment                               |
|------|---|---|
| 1    | Introduction to the Course<br>Benign vs. Malignant Skin Lesions   | Audience Response System                          |
| 2    | Viral Xanthems, Fungal, Parasitic,<br>Bacterial Infections<br>Acanthosis Nigricans, hidradenitis<br>supprativa, melisma, vitiligo,<br>alopecia, onychomycosis | Jeopardy  |
| 3    | SJS, Erythema Multiforme, Urticaria,<br>Angioedema, Toxic Epidermal<br>Necrolysis, Brown Recluse and<br>Arthropod Bites                                       | Student Case Presentations<br><br><b>Exam # 1</b> |
| 4    | Eyes & Ears   | Eyes – Problem-Based Learning<br>Ears – Role Play |
| 5    | Nose & Throat   | Flipped Classroom<br><b>Exam #2</b>               |
| 6    | Shoulder and Upper Extremity<br>Hip/Knee/Ankle and Lower Extremity  | Role Play   |
| 7    | Rheumatological Disorders<br>Deformities<br>Benign vs. Malignant<br>Musculoskeletal Tumors  | Team-Based Learning<br><br><b>Exam #3</b>         |
| 8    | Headache/TA/Meningitis<br>Movement Disorders  | Case-Based Learning<br>Problem-Based Learning     |
| 9    | Neurocognitive & Neuromuscular<br>Disorders<br>Cranial Nerve Disorders  | Concept Mapping<br>Written Exercise               |
| 10   | Seizures & Epilepsy   | Large and small group discussions                 |
| 11   | AVM, cerebral aneurysm,<br>intracranial hemorrhage, syncope<br>Stroke/TIA   | Case presentations                                |
| 12   | CTS, CRPS, GBS<br>Peripheral Neuropathy, ALS,<br>concussion, TBI  | Problem-Based Learning<br>Written Exercise        |
| 13   | Comprehensive Review of Derm,<br>EENT, MSK & Neuro Systems  | <b>Exam #4</b>                                    |
| 14   | FINALS  | <b>Final Exam</b>                                 |
| 15   | Remediation   |   |

### ARC-PA Standards that Pertain to this Course

The Accreditation Review Commission on Education for the Physician Assistant is the accrediting agency that protects the interests of the public and physician assistant profession by defining the standards for physician assistant education and evaluating physician assistant educational programs within the territorial United States to ensure their compliance with those standards. The ARC-PA Standards, 4<sup>th</sup> ed.

that are relevant to this course are listed below:

4<sup>th</sup> Ed. ARC-PA Standards (<http://www.arc-pa.org/accreditation/standards-of-accreditation/>)

- B1.01 – The curriculum *must* be consistent with the mission and goals of the program.
- B1.02 – The curriculum must include core knowledge about the established and evolving biomedical and clinical sciences and the application of this knowledge to patient care.
- B1.03 – The curriculum must be of sufficient breadth and depth to prepare the student for the clinical practice of medicine.
- B1.04 – The curriculum design *must* reflect sequencing that enables students to develop the *competencies* necessary for current and evolving clinical practice.
- B1.05 – The curriculum must include instruction about intellectual honesty and appropriate academic and professional conduct.
- B1.06 – The curriculum *must* include instruction to prepare students to provide medical care to patients from diverse populations.
- B1.07 – The curriculum *must* include instruction related to the development of problem solving and medical decision-making skills.
- B1.08 – The curriculum must include instruction to prepare students to work collaboratively in interprofessional patient centered teams.
- B1.09 – For each didactic and clinical course, the program *must* define and publish *instructional objectives* that guide student acquisition of required *competencies*.
- B2.03 – The program curriculum *must* include instruction in clinical medicine covering all organ systems.
- B2.04 – The program curriculum must include instruction in interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families and other health professionals.
- B2.05 – The program curriculum *must* include instruction in the patient evaluation, diagnosis, and management.
- B2.06 – The program curriculum *must* include instruction in the provision of clinical medical care across the life span.
- B2.08 – The program curriculum *must* include instruction in the social and behavioral sciences as well as normal and abnormal development across the life span.
- B2.09 – The program curriculum must include instruction in basic counseling and patient education skills.
- B2.10 – The program curriculum *must* include instruction to prepare students to search, interpret and evaluate the medical literature, including its application to individualized patient care.
- B2.13 – The program curriculum must include instruction in patient safety, quality improvement, prevention of medical errors, and risk management.

## **MUPA Competencies Relevant to this Course**

### **Medical Knowledge (MK)**

Graduates will demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care. Graduates will apply the ability to use evidence based medicine, and be able to synthesize areas of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention to care for patients across the life span in culturally diverse populations and rural areas.



**Interpersonal & Communication Skills (ICS)**

Graduates will employ skills to work in inter-professional teams that will result in effective communication with patients, other health care professionals, and patient families. Graduates will be able to accurately document information they obtain with respect to medical, financial, legal, and accuracy purposes.

**Patient Care (PC)**

Graduates will demonstrate the ability to make decisions about diagnostic and therapeutic interventions based on patient preferences, current scientific evidence and informed clinical judgement. Graduates will be able to aim health services for patients on disease prevention, health maintenance and patient and family education.

**Professionalism (P)**

Graduates will demonstrate commitment to excellence in professional relationships and ongoing professional development (including lifelong learning). Physician assistants are expected to have a firm understanding of legal and regulatory requirements as well as the appropriate role of physician assistants in health care.

**Practice-based Learning & Improvement (PBL)**

Graduates will demonstrate the ability to critically analyze their practice in light of their experience, the medical literature and their own self-analysis and self-improvement.

**Systems Based Practice**

Graduates will be prepared to practice cost effective health care and resource allocation that does not compromise patient care. Graduates will be able to discuss ways to partner with supervising/collaborating physicians and other health care professionals to improve the delivery and effectiveness of health care and patient outcomes.

**University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/university-policies). (URL:

<http://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

**Marshall University E-Mail Accounts and Technology Assistance**

You must have and use your MU email account. Your personal email accounts will not be used for official communication with Marshall University programs and personnel. You may redirect your MU email to your own personal email account, but you must sign in to your MU account to do that. Marshall

University uses Office 365 email. For more information, visit [Marshall IT: Office 365](http://www.marshall.edu/it/office365/) (URL: <http://www.marshall.edu/it/office365/>).

For computer and browser requirements, see “Get Connected” and “Internet Browser” at [Student Resources: First Steps](#). See also [IT: Recommended Hardware](#) (URLs: <http://www.marshall.edu/muonline/student-resources/> and <http://www.marshall.edu/it/recommendations/>). To check your browsers, use the [Blackboard Browser Checker](#) and ensure that you set permissions properly and have all the necessary plug-ins. (URL: [https://help.blackboard.com/Learn/Student/Getting\\_Started/Browser\\_Support/BrowserChecker](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support/BrowserChecker) )

- Students must be able to use Marshall Email, as well as the following tools in Blackboard: course messages, assignments, discussion board forums, tests, blogs, journals, wikis, and groups. Links to Blackboard Help and tutorials are available on the Start Here page and on the Tech Support tab in Blackboard. [Adobe Acrobat Reader](#) may be needed to read some files. This plug-in is available free. (URL: <https://get.adobe.com/reader/> ) See the Tech Support tab in Blackboard for additional information and links.
- Students may be required to submit assignments as Microsoft Word documents (.docx), using the most recent Microsoft Office suite. Office 365 is available at no extra charge to students enrolled at MU. For information visit [Marshall IT: Office 365](#) (URL: <http://www.marshall.edu/it/office365/> ).
- See the Tech Support tab in Blackboard for additional information on browsers, technology, and apps.

If you have technical problems, please contact one or more of the following:

- [Blackboard Support Center](#) (URL: <http://marshall.edusupportcenter.com> )
- [Marshall Information Technology \(IT\) Service Desk](#) (Help Desk) (URL: <http://www.marshall.edu/it/departments/it-service-desk/> )  
Huntington: (304) 696-3200
- [Email the IT Service Desk](#) ([itservicedesk@marshall.edu](mailto:itservicedesk@marshall.edu) )

## Technology and Technical Skill Requirement

- Students must be proficient in the use of computers, the Internet, browsers, Microsoft Office Word, and other common applications.

## Course & Faculty Evaluations

Policy Statement Regarding Student Compliance with Course Evaluations: The Physician Assistant Program at Marshall University has a process to assess all aspects of the program. It is important to gain information from our PA students. By implementing a systematic method of collecting student feedback, appropriate PA program faculty, the Program Director, the Curriculum Committee and the Self-Assessment Committee are able to carefully review and respond to student course ratings to identify strengths and weaknesses and promote positive curricular change. Therefore, students are required to complete evaluations of all courses and rotations and their associated faculty/ preceptors. Students who do not to complete course/rotation evaluations within the established timeframe will receive one warning of the penalties for non-compliance. If the student still has not completed the evaluations within 48 hours of the warning, they will have written warning submitted to the Student Progress Committee for possible inclusion as part of their academic record. The PA Program also



recognizes that repeated noncompliance is an issue of professional conduct. If noncompliance occurs in subsequent courses, the student will be required to meet with the Student Progress Committee.

### **Modifications in Course Syllabus Disclaimer**

Every attempt has been made to provide a complete syllabus that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs and experiences of the students.

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