

**GEORGE MASON UNIVERSITY**  
**School of Recreation, Health, and Tourism**

**ATEP 300 A01—Functional Anatomy (3 cr)**  
**Summer 2015**

|                  |                                   |                |  |
|------------------|-----------------------------------|----------------|--|
| DAY/TIME:        | MTWRF 9:30–11:15 am               | LOCATION:      | PW-BRH 148   |
| INSTRUCTOR:      | Jatin P. Ambegaonkar,<br>PhD, ATC | EMAIL ADDRESS: | <a href="mailto:jambegao@gmu.edu">jambegao@gmu.edu</a> |
| OFFICE LOCATION: | BRH 201A                          | PHONE NUMBER:  | 704-993-2123   |
| OFFICE HOURS:    | Times by appointment              | FAX NUMBER:    | 703-993-2025   |

**PREREQUISITES**

**Prerequisite(s):** BIOL 124 - Human Anatomy and Physiology (4cr)

**Corequisite(s):** BIOL 125 - Human Anatomy and Physiology (4cr)

**COURSE DESCRIPTION:**

Increase students' knowledge and exposure to the structural and functional components of human anatomy including musculoskeletal origins, insertions, actions and innervations.

**COURSE OBJECTIVES**

At the completion of this course students should be able to:

1. Identify terminology related to biomechanics.
2. Describe linear, angular, and other forms of motion used in sports.
3. Describe types of mechanical loads that act on the human body
4. Describe the effects of mechanical loads on bones.
5. Describe human skeletal articulations in relation to their movement capabilities.
6. Describe the relationship of the musculotendinous unit to muscle function.
7. Identify muscle function in producing upper and lower extremity movements.
8. Identify muscle function in producing movements of the spine.
9. Describe kinematic and kinetic variables of human movement.
10. Describe the stability of a body in relation to mechanical factors.
11. Identify anatomical landmarks, surface markings, and various soft tissue structures by palpating a live model.

**NATURE OF COURSE DELIVERY**

Hybrid. The class will consist of both lecture and laboratory instruction with the use of live model situations.

**Attendance**

Students are expected to be on time, attend all class meetings and be prepared for in class assignments, activities, laboratories and projects. Excused absences include the following: illness (must bring a receipt or note from a doctor), family death, athletic/academic event, and others at the discretion of the instructor. For known upcoming absences, students must contact the instructor at least one week in advance to the missed class to make up work. In the case of excused illness or some other unforeseen excused absence, the student must contact the instructor via e-mail or telephone. At the next attended class meeting the student will discuss material that is to be

completed. ***Students will have one week from the excused absence to complete any missed assignments.*** It is the student's obligation to pursue any make-up work.

### **Dress**

During the laboratory section of the course, students will be asked to wear appropriate clothing to expose various body parts for the purposes of practicing the application of various palpation skills. Tank tops and sports bras/bathing suit tops will be required when topics focus on the upper body. Shorts will be required will be required when topics focus on the lower body.

### **Technology Use during Class**

As per GMU policy, all sound emitting technology is required to be turned off during the class meeting time. Additionally, ***NO laptop computers, iPads, E-Tablets, Pagers, etc*** will be permitted for use during class time; the exceptions are for use during presentations/projects, and technology deemed as necessary by the Office of Disability Services. Students utilizing various technology devices during class will be asked to leave class and will not be permitted to complete course work or receive any points for assignments that day.

### **Academic Load**

Although many students must work to meet living expenses, employment and personal responsibilities are not a consideration for missed classes, late or incomplete assignments, the course content, or the course schedule (see <http://catalog.gmu.edu>). Student employment does not take priority over academic obligations. It is recognized that many students need to work in order to meet living expenses, however, there are distinct guidelines for students in terms of the number of credit hours which should be attempted based on how many hours per week a student has outside employment. For additional information on the subject, please see the GMU Academic Catalog (<http://catalog.gmu.edu/content.php?catoid=17&navoid=1274#academicload>). Students who fail to observe these guidelines may expect no special consideration for academic problems arising from the pressure of employment.

### **E-mail Correspondence**

Only messages that originate from a George Mason University address will be accepted. The following is an appropriate professional format:

Dear Dr. Ambegaonkar (*Beginning salutation*)

I am looking forward to your class. (*Text body*)

Regards, (*Ending Salutation*)

Jatin P. Ambegaonkar (*Your name*)

### **REQUIRED READINGS**

- 1) Floyd, R.T. (2015). Manual of Structural Kinesiology, 19<sup>th</sup> edition. McGraw Hill.
- 2) Biel, A. (2014). Trail Guide to the Body, 5<sup>th</sup> Edition. Books of Discovery.
- 3) Biel, A. (2014). Trail Guide to the Body Student Workbook, 5<sup>th</sup> Edition. Books of Discovery.
- 4) Biel, A. (2014). Trail Guide to the Body Flashcards, 5<sup>th</sup> Edition. Books of Discovery. ***OR*** AnatomyMapp app from [www.BooksOfDiscovery.com](http://www.BooksOfDiscovery.com)

### **EVALUATION**

Students will be evaluated on content standards (knowledge gained) and performance (demonstration of the content). Content standards will be assessed via written assignments, quizzes, and exams. Performance will be assessed through completion of class participation activities and competency testing.

### **Class Participation**

If you do not attend class you cannot complete activities. Just being present in class does not mean you are an active and engaged participant in activities taking place that day. Be an active participant in all activities. ***You can only make up an in-class activity if you have pre-approved absence or proof of illness.***

**Assignments**

Students will turn in class assignments that are listed on the course calendar. Assignments may include fill in the blanks, drawing, and short answer activities.

**Student Work Book**

Students will complete the Student Work Book over the entire course and submit it as per syllabus timeline.

**Quizzes**

As indicated on the Course Calendar, a quiz will be given at the beginning of class for the required reading. This will be a brief multiple choice and true-false assessment of your knowledge from the readings. ***You are required to bring a Scantron to each quiz.*** If you are late to class, you cannot make up the quiz at the end of class.

**Written Examinations**

Three written examinations will be administered. The format of the examinations may be multiple choice, true/false, labeling, short answer, matching, and fill in the blanks type questions. Each of the examinations will test material covered during the prior class meetings and previous reading assignments. Exams will also cover material in the textbook and activities completed during class sessions.

**Palpation Examination**

One assessment of palpation psychomotor skills will be administered throughout the semester. The skills practiced in class will be assessed in a live practical examination format. This is a real time examination that will require the student to locate various anatomical structures on a live model. Students will be randomly scheduled for testing.

**NO late assignments will be accepted!**

| <b>Evaluation Type</b> | <b>Number</b> | <b>Points each</b> | <b>Total points</b> |
|------------------------|---------------|--------------------|---------------------|
| Class Participation    | 10            | 2.5                | 25                  |
| Assignments            | 7             | 25                 | 175                 |
| Student Work Book      | 1             | 40                 | 40                  |
| Quizzes                | 6             | 10                 | 60                  |
| Written Examinations   | 3             | 50                 | 150                 |
| Palpation Examination  | 1             | 50                 | 50                  |
| <b>TOTAL POINTS</b>    |               |                    | <b>500</b>          |

**Grading Scale**

The student's final letter grade will be earned based on the following scale:

- |                          |                          |
|--------------------------|--------------------------|
| A: 465 – 500 pts. (93%)  | C+: 385 – 399 pts. (77%) |
| A-: 450 – 464 pts. (90%) | C: 365 – 384 pts. (73%)  |
| B+: 435 – 449 pts. (87%) | C-: 350 – 364 pts. (70%) |
| B: 415 – 434 pts. (83%)  | D: 315 – 349 pts. (63%)  |
| B-: 400 – 414 pts. (80%) | F: < 315                 |

TENTATIVE COURSE SCHEDULE

| DATE  | TENTATIVE TOPIC   | READING ASSIGNMENT   | QUIZ (Q)/ ASSIGNMENT (A) |
|---|---|--|--------------------------|
| 5-18  | Introduction to course and the Study of Functional Anatomy (Review)   |  |                          |
| 5-19  | Anatomical direction terminology, Body regions, Planes, Axes<br>Skeletal system, Bone type/features/markings, Joint Types<br>Joint motion, movements & terminology<br>Muscle names, contractions, roles | <b>F:</b> pg 1-27, 35-47<br><b>TG:</b> pg 20-37<br><b>SWB:</b> Bring To Class      | <b>Q1</b>                |
| 5-20  | Neuromuscular system, dermatomes/myotomes   | <b>F:</b> pg 35-62<br><b>TG:</b> pg 42<br><b>SWB:</b> Bring To Class               | <b>Q2</b>                |
| 5-21  | Shoulder girdle<br>Palpation Intro  | <b>F:</b> pg 89-104<br><b>TG:</b> pg 1-18, 46-50, 61-62, 65-66                     | <b>Q3</b>                |
| <b>Written Examination #1 available on line from 5-21 at 12pm to 5-25 at 12pm</b> |   |  |                          |
| 5-25  | <b>Memorial Day- No formal class meeting</b>  |  |                          |
| 5-26  | <b>On-line Class</b><br>Shoulder Joint  | <b>F:</b> pg 111-135<br><b>TG:</b> pg 46, 48-50, 61-65, 100, 102-103               | <b>A1</b>                |
| 5-27  | <b>On-line Class</b><br>Elbow: Radioulnar joint   | <b>F:</b> pg 143-162<br><b>TG:</b> pg 108, 110-112                                 | <b>A2</b>                |
| 5-28  | <b>On-line Class</b><br>Wrist, and Hand   | <b>F:</b> pg 169-201<br><b>TG:</b> pg 108, 110-112, 116-119, 119-120, 127-131, 149 | <b>A3</b>                |
| <b>Written Examination #2 available on-line from 5-28 at 12pm to 6-1 at 12pm</b>  |   |  |                          |
| 6-1   | <b>On-line Class</b><br>Pelvis and Hip Joint  | <b>F:</b> pg 229-266<br><b>TG:</b> pg 276-283                                      | <b>A4</b>                |
| 6-2   | <b>On-line Class</b><br>Thigh and Knee  | <b>F:</b> pg 273-287<br><b>TG:</b> pg 305, 344-345, 347-348, 392-392               | <b>A5</b>                |
| 6-3   | <b>On-line Class</b><br>Lower Leg, Ankle and Foot   | <b>F:</b> pg 293-323<br><b>TG:</b> pg 246  | <b>A6</b>                |
| 6-4   | <b>On-line Class</b><br>Trunk & Spinal Column   | <b>F:</b> pg 329-356<br><b>TG:</b> pg 168, 170-174, 188-195, 240-243               | <b>A7</b>                |
| <b>Written Exam #3 Available on-line from 6-4</b>                                 |   |  |                          |

|      | <i>at 12pm to 6-8 at 12pm</i>                                       |   |           |
|------|---|---|-----------|
| 6-8  | Shoulder Joint Palpation<br>Shoulder Girdle Palpation               | <b>TG:</b> pg 46-60, 67-88, 89-94, 99, 102-106, 274<br><b>SWB:</b> pg 1-2, 25-50  | <b>Q4</b> |
| 6-9  | Elbow: Radioulnar joint Palpation<br><br>Wrist, and Hand Palpation  | <b>TG:</b> pg 95-98, 106, 108-109, 113-130, 132-166<br><b>SWB:</b> pg 52-82   | <b>Q5</b> |
| 6-10 | Pelvis and Hip Joint Palpation                                      | <b>TG:</b> pg 284-295, 315-342<br><b>SWB:</b> pg 143-159  | <b>Q6</b> |
| 6-11 | Thigh and Knee Palpation<br>Lower Leg, Ankle and Foot Palpation Lab | <b>TG:</b> pg 306-314, 350-365, 371-391, 394-405<br><b>SWB:</b> pg 160-208  |           |
| 6-15 | Trunk & Spinal Column Palpation                                     | <b>TG:</b> pg 169, 175-187, 196-223, 244-249<br><b>SWB:</b> pg 85-117   |           |
| 6-16 | Palpation Review<br><b>SWB are due at the beginning of class!</b>   | <b>SWB are due at the beginning of class!</b>   |           |
| 6-17 | <b>Palpation Exam</b>   | <b>Palpation Exam</b>   |           |
| 6-18 | Review Day...if needed  |   |           |
|      |   | <b>F:</b> Floyd. Manual of Structural Kinesiology<br><b>TG:</b> Trail Guide to the Body<br><b>SWB:</b> Trail Guide to the Body Student Workbook |           |

*Note: Faculty reserves the right to alter the schedule as necessary.*

### *Student Expectations*

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].
- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].
- Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.

### *Campus Resources*

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].
- For additional information on the College of Education and Human Development, School of Recreation, Health, and Tourism, please visit our website [See <http://rht.gmu.edu>].

CORE VALUES COMMITMENT: The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles.



## Student Acknowledgement of Syllabus

I, \_\_\_\_\_, by signing below, attest to the following:  
(Print First and Last Name)

\*I have read the course syllabus for ATEP 300 in its entirety, and I understand the policies contained therein. This syllabus serves as a binding contract for ATEP 300 between me and the instructor.

\*I have a clear understanding of the due dates for assignments and examinations, and I accept responsibility for the material.

\*I am aware that failure to submit assignments by the dates assigned will result in no points awarded as late work will not be accepted.

\*I understand the instructor reserves the right to alter the provided schedules as necessary and I am responsible for the assignments and examination dates for the most current version of the syllabus schedule.

\*I accept responsibility for reading announcements that are sent to me via e-mail through Blackboard; it is my responsibility to access my Blackboard e-mail for messages, or forward Blackboard e-mail as per the directions provided in the syllabus.

\_\_\_\_\_  
(Signature) (Date)

*(Student Copy: This copy should remain attached to your syllabus)*

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\_\_\_\_\_  
(Signature) (Date)

*(Instructor Copy: Submit to the instructor at the end of the first class meeting)*