KIN 309 Anatomy of Human Movement

Course Syllabus

# -Instructor Information for Kristin Meyer, DPT, SCS, ATC

**Office:** Law Hall 306-D

**Phone:** (319) 895-4591 (on-campus, x 4591)

**e-mail:** kmeyer@cornellcollege.edu

Office Hours: Generally Mon, Wed, 1-3pm or by appointment

You can look for my available appointments at: https://kmeyer.youcanbook.me/

# -General Course Information

**KIN 309 Anatomy of Human Movement** provides an in-depth study of the anatomical and neuromuscular factors associated with human movement. Topics to be covered in this course include: connective tissue and skeletal system physiology, identification of major musculoskeletal structures (bones and bony landmarks, origins and insertions for major muscles, muscle groups, major tendinous/ligamentous structures), joint movements, and aggregate muscle actions.

**Prerequisite**: KIN 207 Systems Physiology

**Class Hours:** See schedule, 8:30 am - 11:30 am M-F (some Tuesdays class may run 9-11am and 1-3pm)

# -Location for Lecture and Lab: Anatomy Lab , Russell Science Center, room 121

**Required Course Materials:**

1. R.T. Floyd, Manual of Structural Kinesiology (20th ed.), McGraw Hill. ISBN: 978-1-259-87043-9
2. Elaine N. Marieb & Katja Hoehn, Human Anatomy & Physiology 11th ed.), Pearson Benjamin Cummings. ISBN: 9789780134580999

**Suggested Course Materials:**

- A Brief Atlas of the Human Body, Benjamin Cumings

- Colored pencils

**Web addresses for Online Learning Centers:** <http://www.pearson.com/mastering/aandp>,

[www.mhhe.com/floyd18e](http://www.mhhe.com/floyd18e)

# -Course Objectives (Outcomes)

1. To demonstrate an understanding of anatomical terminology and fundamental neuromuscular concepts applied to human movement (knowledge, well-being)
2. To increase the understanding of the musculoskeletal framework for human movements, including: bones and body landmarks, major muscles (including study of origins and insertions upon the skeletal system), aggregate muscle actions, joint movements, and major tendons/ligaments
3. To provide exposure to the physiological principles related to the skeletal system and neuromuscular control of muscular force generation
4. To provide opportunities for students to apply anatomical and neuromuscular principles to human movement, specifically with regard to sport or leisure activities and musculoskeletal injuries

This course supports the Educational Priorities and Outcomes of Cornell College with emphasis on knowledge, well-being, inquiry, vocation, and reasoning**.**

# -Course Content

1. **Handouts:** Handouts, review sheets, and other course materials will be posted on Moodle.
2. **Exams:** There will be 3 written exams and 1 practical examination. Each written exam will be worth ~60 points (20% of the final grade) and will include structure identification from visual images, multiple choice questions, true/ false, and short answer questions. The practical examination will be worth ~35 points (15% of the final grade). It will be a timed test in which students will be asked to identify different anatomical structures on skeletal, muscular, and joint models (may also include surface anatomy). The practical exam is cumulative in nature.

Make up exams will not be given except under extreme, extenuating circumstances and must be previously approved and arranged.

1. **Assignments and Labs:** There will be numerous in-class exercises and homework assignments throughout the block as well as labs which enhance practical learning (worth 20% of final grade).
2. **Attendance and Participation:** There is required attendance at all class sessions including labs. Class attendance and active participation in class activities is essential to this course and will count favorably towards this component of the final grade (worth 5% of final grade).

# -Assessment of Student Learning and Final Grade Determination

The following activities will be used to assess student learning:

|  | **Points** | **Weighted Percentage**  **of Final Grade** |
| --- | --- | --- |
| Exam 1 | ~60 | 20% |
| Exam 2 | ~60 | 20% |
| Exam 3 | ~60 | 20% |
| Practical Exam | ~35 | 15% |
| Assignments and Labs | ~300 | 20% |
| Attendance and Participation |  | 5% |

The following grading scale will be used to determine Final Grades for this course:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | B+ = 87-89% | C+ = 77-79% | D+ = 67-69% |  |
| A = 93-100% | B = 83-86% | C = 73-76% | D = 63-66% | F = < 60% |
| A- = 90-92% | B- = 80-82% | C- = 70-72% | D- = 60-62% |  |

# -Course Policies

1. **Learning Expectations:** Successful completion of KIN 309 requires a significant time commitment, both inside and outside of the classroom. Students are expected to attend all class meetings (see Attendance Policy below). Additionally, students are expected to spend a significant amount of time (2-4 hours daily): a) reviewing the text to prepare for upcoming lectures, b) completing assignments and assigned readings, and c) reviewing lecture notes.

Students are also encouraged to ask questions when a more detailed explanation for anatomical or physiological concepts is needed—ideally “lecture” would include two-way communication between students and the professor to promote discussion and the sharing ideas rather than a formal lecture with little opportunity for student-professor interaction. This is best facilitated by students coming to class prepared to discuss ideas and ask questions about unclear concepts.

1. **Attendance:** Successful completion of KIN 309 is highly dependent upon daily attendance and active participation in course activities. Please inform me ahead of time if you will not be attending class. A final grade of “F” will be assigned upon accumulating three or more unexcused absences.
2. **Make up Policy:** Students are allowed to make up coursework missed due to an excused absence. There are two main criteria for determining whether or not a student may make up missed coursework: 1. the student misses class due to a College-approved excuse (mandatory attendance at a college-sponsored event or documented medical excuse), considered and “excused absence” 2. the student makes arrangements to make up the missed coursework prior to the absence. It is the student’s responsibility to contact me about making up coursework and to provide documentation for the absence.
3. **Late Assignments:** Assignments turned in following the due date and time will not be accepted without prior approval. In the event a student has approval to submit late coursework, a 1% per hour grade reduction will be imposed. The late penalty is waived for excused absences.
4. **Professionalism:** It is expected that students will practice “professionalism” in our classroom. This includes displaying respect to other students, addressing professors and guests by the appropriate titles (Dr., Professor, etc.), and observing and adhering to the policies outlined by the Kinesiology Department during use of laboratory equipment and facilities. The professor reserves the right to excuse any student who displays a disruptive attitude toward other students or the professor, as allowed by guidelines set forth in the Faculty Handbook. Computers and tablets are allowed and encouraged if used for educational purposes. **Students are expected to arrive for class on time and turn off cell phones prior to class.** The Professor reserves the right to remove cell phones or other technology if they become disruptive to the class.
5. **Withdrawal from the Course:** According to Cornell College guidelines, students may withdrawal from this course on the 15th day of the block assuming that they meet specific criteria as listed in the Course Catalogue. This option is available for the student who has made a good faith effort to perform well in class, as demonstrated by consistent attendance and participation in course activities and completion of all assignments.

# -Honesty in Academic Work

Cornell College expects all members of the Cornell community to act with academic integrity. An important aspect of academic integrity is respecting the work of others. A student is expected to explicitly acknowledge ideas, claims, observations, or data of others, unless generally known. When a piece of work is submitted for credit, a student is asserting that the submission is her or his work unless there is a citation of a specific source. If there is no appropriate acknowledgment of sources, whether intended or not, this may constitute a violation of the College's requirement for honesty in academic work and may be treated as a case of academic dishonesty. The procedures regarding how the College deals with cases of academic dishonesty appear in [The Compass](http://www.cornellcollege.edu/student-affairs/compass/index.shtml), our student [handbook](http://www.cornellcollege.edu/student-affairs/compass/academic-policies/honesty-in-academic-work.shtml), under the heading "Academic Policies – Honesty in Academic Work."

**Cheating** refers to the use of unauthorized sources of information on examinations or any attempt by students to deceive the evaluator of an examination, paper, or project.

**Plagiarism** is the act of taking the work of another and presenting it as one's own, without acknowledgement of the original source.

# -Students with Disabilities

Cornell College is committed to providing equal educational opportunities to all students. Cornell College makes reasonable accommodations for persons with disabilities. Students should notify the Coordinator of Academic Support and Advising and their course instructor of any disability related accommodations within the first three days of the term for which the accommodations are required, due to the fast pace of the block format.  For more information on the documentation required to establish the need for accommodations and the process of requesting the accommodations, see the [academic support and advising web page.](http://www.cornellcollege.edu/academic-support-and-advising/disabilities/index.shtml.)

**Contact**: Brooke Paulsen, Coordinator of Academic Support & Advising

Phone: 319-895-4382 Office: Library 309

# -Statement of Diversity and Inclusion

Cornell College values diversity and strives to create a welcoming community in which all individuals are respected and included. We support respectful and meaningful inquiry across actual or perceived differences. These differences include ability, age, appearance, athletics and student organization involvement, ethnicity, family/marital status, gender, gender expression, immigration status, language, military/veteran status, nationality, political ideology, race, religion/spirituality, sex, sexuality, socio-economic status, and other personal identities and experiences.

We live in an increasingly interconnected world. The ability to include, communicate, cooperate, and collaborate with diverse individuals is important. To that end, we engage in dialogue around issues of difference, identity, and ideology in the classroom, residence halls, and throughout campus. We embrace diversity, and as a result our viewpoints are enriched and our community strengthened.

The entire campus community is called upon to play a role in Cornell College’s commitment to diversity and inclusion. Cornell will continue to evolve into a more inclusive and equitable campus that is committed to civic and social responsibility through the collaboration of the President, Diversity Committee, students, faculty, and staff.

* **Freedom of Expression and Civil Discourse Statement**

Cornell College is an institution of higher education that aspires to develop lifelong learners and engaged citizens. Consistent with that mission, we strongly endorse freedom of speech, as articulated in the First Amendment, as an inherent right of individuals to express themselves. Expression and personal identity are inextricably intertwined. Further, while freedom of speech and expression are accorded constitutional protection in our civic life, the value of free expression must be given even more rigorous affirmation in an intellectual community that prizes liberal education, academic freedom, and critical thinking.

As a small, residential community of persons with diverse identities and backgrounds, Cornell is also committed to maintaining an inclusive campus climate and emphasizes the importance of communication and cooperation between individuals who hold different perspectives, opinions, and identities. Civil discourse refers to the inherent responsibility of individuals to engage respectfully with the intent to foster understanding. In a community like ours, civil discourse is highly valued, as it guides the approach all individuals should take in order to achieve an inclusive campus. Therefore, we expect that community members, when engaging in civil discourse, will approach each other with:

1. **The intention to understand**—The process of civil discourse places responsibility on both the speaker and the listener to be willing to learn, acknowledging that neither one has all of the answers. It can be messy, involves risk, and is ultimately rewarding. Active listening and asking thoughtful questions are key components.
2. **Respect for the inherent dignity and worth of every person**—Civil discourse means that we recognize that all persons, regardless of differences and disagreements, have inherent dignity, worth, and their own unalienable right to freely express themselves.
3. **Commitment to learning and appreciation for critical thinking**—Freedom of speech is fundamental for learning, critical inquiry, and growth as an individual and as a community. Civil discourse involves thinking critically about all ideas, opinions, and identities one encounters. The invitation to think critically is meaningless unless diversity of opinion and perspective is not only respected but actively sought out.
4. **Empathy**—A critical component of civil discourse is empathy. In practicing empathy, each individual involved attempts to understand the feelings, experiences, and perspectives of another.

**Tentative Class Schedule**

|  |  |  |
| --- | --- | --- |
| **Date** | **8:30-11:30** | **Readings** |
| Mon, Feb 11 | **Topic:** Anatomical Terminology & skeletal system overview  **Lab 1:** Axial and appendicular skeletons and body regions | **A&P:** Ch 1 (12-17)  **Floyd:** Ch 1 (1-11) |
| Tues, Feb 12 | **Topic:** Connective tissue physiology: bone, cartilage, tendons, and ligaments | **A&P:** Ch 4 (126-137), Ch 6  **Floyd**: Ch 1 (11-14) |
| Wed, Feb 13 | **Topic:** Synovial Joints and Joint Motions **Lab 2:** Synovial Joints | **A&P:** Ch 8 (251-276)  **Floyd**: Ch 1 (14-27) |
| Thurs, Feb 14 | **Topic**: Neuromuscular Fundamentals of Human Movement  **Lab 3:** Analysis of muscle contraction | **A&P**: Ch 9 (review), Ch 10 (323-332)  **Floyd**: Ch 2 |
| Fri, Feb 15 | **Exam 1 (from 9-11am)** |  |
| Mon, Feb 18 | **Topic:** Shoulder Girdle anatomy  **Lab 4**: Shoulder Girdle | **A&P:** Ch 7 (227-229), Ch 10 (350-353)  **Floyd:** Ch 4 |
| Tues, Feb 19 | **Topic:** Glenohumeral Joint anatomy with  **Lab 5:** Glenohumeral joint | **A&P:** Ch 7 (232-236), Ch 8 (266-268), Ch 10 (353-357)  **Floyd:** Ch 5 |
| Wed, Feb 20 | **Topic:** Anatomy of the elbow, wrist, and hand with **Lab 6**: Elbow, wrist, and hand  APR quiz | **A&P**: Ch 7 (230-234), Ch 8 (266-268), Ch 10 (358-363)  **Floyd**: Ch 6-7 |
| Thurs, Feb 21 | **Group Project I**: Movement analysis of the upper extremities  (meet in classroom 15 of the Sports Center) | **Floyd:** Ch 8 |
| Fri, Feb 22 | **Exam 2 (from 9-11 am)** |  |
| Mon, Feb 25 | **Topic:** Anatomy of the hip and Pelvic Girdle  **Lab 7**: Hip | **A&P**: Ch 7 (236-242), Ch 8 (268-269), Ch 10 (367-386)  **Floyd:** Ch. 9 |
| Tues, Feb 26 | **Topic:** Knee anatomy  **Lab 8:** Knee | **A&P**: Ch 7 (240-245), Ch 8 (270-276), Ch 10 (367-386)  **Floyd:** Ch 10 |
| Wed, Feb 27 | **Topic:** Ankle and foot anatomy  **Lab 9:** Ankle and foot  APR Quiz | **A&P**: Ch 7 (240-245), Ch 8 (270-276), Ch 10 (367-386)  **Floyd:** Ch 11 |
| Thurs, Feb 28 | **Topic:** Anatomy of the trunk and spinal column  **Lab 10**: Trunk and Spinal Column | **A&P:** Ch 7 (218-226), Ch 10 (340-343)  **Floyd:** Ch 12 |
| Fri, Mar 1 | **Group project II:** Movement analysis of trunk and lower extremities  (meet in Classroom 15 of the Sports Center) | **Floyd**: Ch 13 |
| Mon, Mar 4 | Open lab – review for practical exam |  |
| Tues, Mar 5 | **Comprehensive Practical Exam** |  |
| Wed, Mar 6 | **Exam 3 (from 9-11 am)** |  |