CDS 564 – Anatomy of Movement  
Marlboro College  
Fall 2013

Class Time: MW 10:30-12:20  
Class Location: Dance Studio  
Credits: 4

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**Course Description:**  
An introduction to human anatomy with emphasis on the musculoskeletal system and biomechanical principles of movement. Concepts will be explored through a combination of scientific study, experiential anatomy, and dance movement.

**Course Objectives:**  
Upon completion of this course, students will demonstrate:  
- An ability to use anatomical language to describe movement  
- A functional understanding of their own musculoskeletal anatomy and the ability to use that knowledge to inform their own movement  
- Skills in approaching the study of movement both qualitatively and quantitatively  
- An ability to integrate functional, evolutionary, and experiential perspectives of musculoskeletal anatomy.  
- The ability to formulate a question, select appropriate research methods and pursue an investigation towards the desired goal.

**Requirements:**  
- Attendance at all classes  
- Full participation in class discussions and movement exercises  
- Completion of all assignments

**Assignments/Grading:**  
- 5 Quizzes (30%)  
  Dates: 9/23, 10/16, 11/4, 11/18, 12/2  
- Short Projects, Papers and Homework Assignments (30%)  
- Final Assignment (30%)  
- Quality of participation (10%)

**Dress and other details:**  
We will be moving every day in class. Thus, please wear soft, flexible pants and shirts (sweatpants, knits, etc.) that allow you full freedom of movement and that make it possible to palpate your bones and muscles through your clothing. As this course will involve working closely with partners for some exercises, please respect others by maintaining good personal hygiene: shower on the day of class (before class) and wear clean clothes (that you have not worn since you washed them).
**Attendance Policy:**
You must be present consistently to succeed in this class as embodied experiences in class will make up a great portion of our learning. Please arrive on time and be prepared to begin at the start of class. Please bring the full attention of your body and mind to all activities and discussions. You are allowed up to two absences for illness, injury, family emergencies, religious observance, etc. but you are responsible for material missed in your absence. Each absence beyond the initial two will drop the final grade by a number of points (4) equal to the percentage of class time missed, and NO CREDIT will be given for the course if more than 7 classes are missed.

**Sitting Out:**
If you are injured or ill and need to sit out, you should participate as an observer by making notes and contributing to discussions in order to get credit for attending class.

**Tardiness:**
Please arrive on time to class. Three late arrivals will be considered equivalent to one absence.

**Academic Honesty**
We expect that all of the work you hand in is your own. If you are using outside sources you must cite the sources properly and put the information into your own words. Plagiarism will not be tolerated and could be grounds for failure in course. All students are advised to review Marlboro’s guide to documentation here: http://akbar.marlboro.edu/~jsheehy/sources/. For any papers due in the class we will use the Chicago Manual of Style as a guide for citing references, see: http://www.chicagomanualofstyle.org/tools_citationguide.html.

**This syllabus is subject to modification by the instructors at any point during the semester.**

**Required Texts:**
Trail Guide to the Body (4th edition), Biel

All additional reading assignments will be available on electronic reserve.

**Class Schedule:**

9/9 **Introduction & Anatomical language**
- **Readings:** Trail Guide – Introduction & Chapter 1 up to p. 32
- **Due:** Intro Assignment

9/11 **Skeletal Anatomy & Function**
- **Readings:** Trail Guide -- p. 32-34
  - Manual of Structural Kinesiology -- Chapter 1
  - Basic Biomechanics – Chapter 4
- **Due:** HW
9/16 **Nerves & Muscular Anatomy and Function**

Readings: Kinesiology: Scientific Basis of Human Motion – Chapters 3 and 4
          Key Poses of Yoga – p. 10-23

9/18 **Ways of Understanding Movement**

Readings: Kinesiology: Scientific Basis of Human Movement – Chapter 1
          Manual of Structural Kinesiology – Chapter 3
          Dynamic Alignment Through Imagery – Chapter 1

Due: HW

9/23 **Tools & Methods**

Readings: Dynamic Alignment Through Imagery – Chapter 5
          BodyStories – Chapter 2
          “Ground Reaction Forces and Loading Rates Associated with Parkour
          and Traditional Drop Landing Techniques”

Due: QUIZ 1

9/25 **Bipedalism**

Readings: National Geographic -- “Bipedal Body”
          Dance Anatomy and Kinesiology – p. 334-336
          Born to Run – p. 175 – 185
          “Faster Than a Hyena? Running May Make Humans Special?”

Due: HW

9/30 **Development**

Readings: Somatic Patterning – Chapter 7

10/2 **Upper Limb – Shoulder (part 1)**

Readings: Trail Guide -- p. 48-59
          Basic Biomechanics – p. 186-192
          Krobot et al. “Functional categorization of the individual morphology
          of the scapula”

Due: HW

10/7 **Upper Limb – Shoulder (part 2)**

Readings: Trail Guide – p. 61-106
          Dance Anatomy and Kinesiology – p. 453-460

Due: Gait Analysis

10/9 **Upper Limb – Elbow/Wrist/Hand**

Readings: Anatomy of Movement – Chapter 5
Due: Three possible questions to investigate in short paper

10/14 **Upper Limb – Synthesis**
Readings: no new reading – review for quiz
Due: Presentation of wrist and hand muscle groups

10/16 **Head & Neck**
Readings: Trail Guide – Chapter 5
Due: QUIZ 2

10/21 **NO CLASS – Hendricks’ Day**

10/23 **Spine/Ribs/Posture**
Readings: Basic Biomechanics – p. 276-293
Trail Guide – p. 167-205

10/28 **Breathing and Abdominals**
Readings: Trail Guide – p.205-224
Dynamic Alignment Through Imagery – Chapter 16
Due: Short Paper

10/30 **Pelvis**
Readings: Trail Guide p. 276-301
TBA

11/4 **Lower Limb – Hip/Thigh**
Readings: Trail Guide – p. 296-342
Body Stories – chapter 19
Dance Anatomy and Kinesiology – p. 229-235 (optional)
Due: QUIZ 3

11/6 **Lower Limb – Knee/Calf**
Anatomy of Movement - p. 208-226
Dance Anatomy & Kinesiology – p.283-293 (optional)
Due: FINAL PROJECT PROPOSAL- Draft
11/9 **BodyWorlds Fieldtrip**  
Depart at 8am from campus, Return around 11:30pm

11/11 **Lower Limb – Ankle/Foot**  
Readings:  
- Dance Anatomy & Kinesiology – P. 359-370  
- National Geographic: “What Tree-Climbing Pygmies Tell Us about Foot Evolution”  
- “How Did Fins Evolve Into Feet?”

Due: Short Paper rewrites

11/13 **Lower Limb – Synthesis**  
Readings: no new reading – review for quiz

Due: FINAL PROJECT PROPOSAL

11/18 **Other Body Systems – Circulation (Blood and Lymph)**  
Readings: TBA

Due: QUIZ 4

11/20 **Other Body Systems – Tissue and Organs (Digestion and Fascia)**  
Readings:  
- BodyStories – Chapter 26  
- The Scientist -- “The Science of Stretch”  
- Job’s Body – p. 21-33

11/25 **Other Body Systems – Brain and Endocrine**  
Readings:  
- Essentials of Human Anatomy & Physiology – Chapter 9  
- Scientific American -- “The Neuroscience of Dance”  
- TBA

Due: HW (assignment from Megan Frazier)

11/27 **NO CLASS – Thanksgiving**

Due: Optional full draft of final paper

12/2 **Injuries and Healing – Guest: Megan Frazier**  
Readings:  
- Dance Kinesiology – Chapter 13 (optional) and 18 (for all)  
- Other readings from guest speaker TBA

Due: Take home QUIZ 5

12/4 **Aging and Diseases that Affect Movement**  
Readings:  
- Neurologic Emergencies – Chapter 7
Frontiers – “Six months of dance intervention enhances postural, sensorimotor, and cognitive performance in elderly without affecting cardio-respiratory functions”

12/9 Final Project Presentations (day 1)

12/11 Final Project Presentations (day 2)

Course Bibliography:


