MEMORANDUM

TO:

Phil Kraemer, Ph.D.

Associate Provost for Undergraduate Education

FROM:

Jennifer Brueckner, Ph.D.

Anatomy and Neurobiology

DATE:

July 19, 2006

SUBJECT:

Creation of an online section of ANA 209 (Principles of Human

Anatomy)

In May 2006, I corresponded with your office regarding the creation of an online section of ANA 209 for Spring 2007, in order to accommodate an escalating annual demand, as well as to facilitate increasing numbers of nontraditional students changing careers. You indicated that a course change would not be necessary, but that we should submit a copy of the syllabus for both the traditional and online versions of ANA 209 as well as a statement from our Chair to the Undergraduate Council for consideration in accordance with SACS guidelines.

Please contact me (jbrueck@uky.edu; 323-3780) if the Undergraduate Council has any questions or concerns regarding this request.

ANA 209-201 Principles of Human Anatomy

Lectures: Off Campus
Part of Distance Learning Programs (859) 257-3377

Course Directors

Dr. B.R. MacPherson Dr. J.K. Brueckner

This course utilizes *Blackboard*TM (https://elearning.uky.edu/) for all links to this syllabus, Powerpoint presentations, answers to learning objectives, and grades.

Course Description

This is the on-line version of ANA 209-001. The structure of and function of the human body will be examined at various levels: cellular, tissues, and organ systems. The gross anatomical arrangement of the body will be studied in a system-by-system format relating structure to function and the fundamentals of human embryology/malformation with adult anatomy. The central nervous system will be emphasized.

Course Objectives

- 1. To examine the gross anatomical arrangement of the human body in a system-by-system format.
- 2. To examine the structure of the human body at multiple levels, including cellular, tissue level, and organ systems.
- 3. To relate the structure of the human body to its function.
- 4. To explore the fundamentals of human embryology/malformation as it relates to adult anatomy.
- 5. To emphasize the human nervous system, including the structure, function, and various developmental aspects.
- 6. To provide a comprehensive undergraduate anatomy course suitable for preprofessional students.

The course will provide the opportunity to learn basic knowledge about the functional components of the human body, their development, and anatomical relationships. The course briefly covers the principal cells and tissues of the body. The emphasis of the course is system anatomy with a focus on the central nervous system, embryology, and an introduction to function (physiology).

ANA 209 Fall 2006		
Date*	Lecture Number	Topic
1/10/07	1	Introduction to Anatomy
1/12/07	2	Tissues
1/15/07	NO CLASS	MLK Holiday
1/17/07	3	Integumentary System
1/19/07	4	Cartilage
1/22/07	5	Bone
1/24/07	6	Bone Formation
1/26/07	7	Skeleton
1/29/07	8	Articulations*
4/04/07	9	Muscular System I
1/31/07	Review Session	6:00 p.m. ((Room MN 263)
2/2/07	EXAM 1*	20% of final grade (NURS 201 - 6pm)
2/5/07	10	Muscular System II
2/7/07	11	Nervous System I
2/9/07	12	Nervous System II
2/12/07	13	Nervous System III
2/14/07	14	Nervous System IV
2/16/07	15	Nervous System V
2/19/07	16	Nervous System VI & Referred Pain**
2/21/07	17	Special Senses
	Review Session	6:00 p.m. (Room MN 263)
2/23/07	EXAM 2**	20% of final grade (NURS – 6pm)
2/26/07	18	Cardiovascular System I
2/28/07	19	Cardiovascular System II
3/2/07	20	Cardiovascular System III
3/5/07	21	Lymphatic System I
3/7/07	22	Lymphatic System II
3/9/07	23	Endocrine System***
3/12-16/07	NO CLASS	MIDTERM BREAK
3/19/07	24	Respiratory System I
3/19/07	Review Session	6:00 p.m. (Room MN 263)

3/21/07	EXAM 3***	20% of final grade (NURS 201 – 6pm)
3/23/07	25	Respiratory System II
3/26/07	26	Digestive System I
3/28/07	27	Digestive System II
3/20/07	28	Digestive System III
4/2/07	29	Digestive System IV
4/4/07	30	Urinary System I
4/6/07	31	Urinary System II****
4/9/07	32	Male Reproductive System I
4/9/07	Review Session	6:00 p.m. (Room MN 263)
4/11/07	EXAM 4***	20% of final grade (NURS 201 – 6pm)
4/13/07	33	Male Reproductive System II
4/16/07	34	Female Reproductive System I
4/18/07	35	Female Reproductive System II
4/20/07	36	Fertilization and Implantation
4/23/07	37	Embryonic Development
12/1/06	38	Embryonic and Fetal Development
4/25/07	39	Fetal Development and Parturition
		Course Evaluations
4/27/07	Review Session	6:00 p.m. NURS 201
4/30/07	NO CLASS	
5/2/07	FINAL EXAM 1-3	20% of final grade (NURS 201 – 6pm)

^{*} Dates are suggestive of when the student should be regularly conducting their on-line coursework. **The bolded dates** are mandatory exam dates when student must come on to campus to write the exam in the room and at the time indicated.

Textbooks

Required Text: Human Anatomy by Ken Saladin, McGraw Hill Publishing, ISBN 0-07-039080-0. Available at the following stores:

Kennedy Book Store:

Address:

405 S. Limestone St., Lexington, Ky., 40508

Phone:

859-252-0331 (local) or 1-800-892-5165 (toll free)

E-mail:

textbook@kennedys.com

Website:

http://kennedys.com

UK Bookstore:

Address:

106 Student Center Annex Lexington, KY 40506

Phone:

859-257-6304 local or 866-685-2583 toll-free

E-mail:

fbaker@ukbookstore.com

Website:

http://www.ukbookstore.com

Faculty

Course Directors:

Dr. Brian R. MacPherson

UKMC MS 215 Phone: 323-5539

Email: brmacp@uky.edu

Dr. Jennifer Brueckner

UKMC MN 224 Phone: 323-3780

Email: jbrueck@uky.edu

Office Hours

ANA 209-201 does not generally offer office hours – unless specifically arranged by email through the course director. Students with questions/concerns should email the graduate assistant available through *Blackboard*TM.

<u>Grading</u>

There will be five examinations during the course. Each exam will be worth 20% of your total grade. Each exam will be based on material only from the last exam to the present. The final exam is comprehensive only in as much as it involves the lectures on embryology. These lectures deal with the formation and development of systems already studied in various body regions and therefore is somewhat cumulative in that regard. Each of the 5 exams will contain 60 multiple choice questions reduced to a grade out of 20 – representing 20% of your total grade.

You are encouraged to make an appointment to look over your exam by visiting one of the graduate assistant's in their office. Contact them by email. Your exams will not be returned to you.

You WILL BE required to produce a picture I.D. before, during or upon turning in your examination.

*NO phones or beepers are permitted at your seat in the examination room. All book bags etc. must be left at the front or back of the lecture hall.

*Final Grades for the course will be awarded as follows:

A = 90 - 100%

B = 80 - 89.5%

C = 70 - 79.5%

D = 60 - 69.5%

E = 0 - 59.5%

At the end of the course a curve may be applied if the class average is below 75%. **Do not count on this curve to obtain a specific grade, the class average will normally be at or above 75%.

Attendance at all five exams is required and unless a valid excuse is presented for being absent a grade of '0' (zero) will be awarded for that exam. Make-up exams will be arranged for students with valid excuses. The type of make-up exam will be determined by the instructor and may include short answer, essay, true/false and multiple choice questions. A valid excuse for an absence must be in compliance with the University Senate rule on excused absences. Briefly they are:

- Illness of the student or serious illness of a member of the student's immediate family. A note from the Health Service stating you visited or were treated there is not appropriate verification. The physician's name must be presented along with permission to contact that individual to verify you were too ill to take the examination.
- 2. The death of a member of the student's immediate family.

 Appropriate verification will be requested.
- 3. Trips for members of student organizations sponsored by an academic unit, trips for university classes, and trips for participation intercollegiate athletic events. When feasible the student must notify the instructor **prior to** the occurrence of these absences. In no case will such notification occur more that one week after the absence. Formal notification form appropriate university personnel will be required to verify the student's participation in such trips.
- Major religious holidays. Students are responsible for notifying the instructor in writing of anticipated absences due to observance of such holidays no later than the last day for adding a class.

How to be SUCCESSFUL in this Course

There is an **ART** to studying the information in this course and being successful on the exam. For smart studying you need to **Absorb**, **Retain**, and **Test** yourself.

After **each** class, review the notes. If you don't review today's lecture for several weeks, you will have forgotten 80 to 95% of it. After reviewing the day's notes, **summarize** what the lecture was about.

Be sure there is nothing in the notes that you don't understand. Can you answer the *Learning Objectives*? If there is material you don't understand, email the graduate assistants before the next lecture. New material often builds on a base of pre-existing material. If you don't understand the basics, the following material will be difficult to understand.

When it comes time to "cram" before the exam, a significant amount of material you don't understand will cause you to panic. This works against effective assimilation of material.

Understand the material, don't simply memorize facts. If you don't understand the concept, and are unable to explain it to yourself or others, memorizing

individual facts about it will not help you pass the exam. Often questions are designed to indicate whether you understand the basic concepts involved in the structure and function of the organ system or process.

Multiple choice and short answer/fill-in-the-blank questions tend to test major concepts while mix and match questions test definitions and specific functions. Be sure you can list specific cells and their functions of each system after you first explain the major concepts of its organization and structure as it relates to its function.

Review all your notes at regular intervals.

Select Anatomy Models are available for use in NURS 602f. A key to the models available follows:

Model #	Description
1	Full body muscle model
2	Sagittal head with facial muscles and brain
3	None
4	Hip joint
5	Shoulder joint
6	Knee joint
7	Cross section of thick and thin skin (macroscopic)
8	Lumbar spine with disks and nerve roots, sacrum, ruptured disk
9	Abdominal cavity showing posterior body wall, peritoneal
	attachments, positions of kidneys and major vessels
10	Opened thorax, diaphragm, pericardium; lungs removed, muscles
	of thoracic wall
11	Opened thorax, pleura and lungs in place. Subclavian arteries and
	veins passing from thorax into axilla
12	Complete vertebral column and spinal cord with nerve roots
13	Cervical vertebra with cord and meninges, also includes vertebral
	arteries
14	Model of ear with ossicles, cochlea and semicircular canals

15	Rubber/plastic sagittal head with removable half brain. Brain
	shows lobes and major gyri. Also, nasal, oral, and laryngeal
	pharynx, hard and soft palates; anterior portion of tongue removed.
16	Large dissected heart showing heart chambers and great vessels
17	Lungs, trachea, larynx, heart, and diaphragm
18	None
19	Stomach, duodenum, pancreas, and related vessels
20	Pancreas, kidneys, duodenum, spleen, and related vessels
21	Kidney, opened, showing cortex, medulla, and pelvis. Also parts of
	nephron are shown
22	Kidneys, ureters, bladder, male reproductive organs and vessels
23	Dissected midline view of the nasal cavity and the nasopharynx
24	Female reproductive organs and perineum
25	Female pelvis and reproductive organs
26	(a,b,c) Development of face during the second intrauterine month
27	Embryo and uterus at end of first intrauterine month
28	Embryo and uterus at end of second intrauterine month
29	Fetus and uterus at end of third intrauterine month
30	External features o fa two month embryo
31	Male reproductive organs
32	Cervical spine, spinal cord and vertebral arteries
33	Plastic brain
34	None
35	Synovial joint - knee
36	None
37	Skull (bone)
38	Skeleton

Computer CD on Human Anatomy

An easy-to-use CD with numerous illustrations of many aspects of human anatomy has been made available to you in the AV Library (6th floor of the NURS building). It is well organized and easy to pull up an illustration of specific organs or systems. This may be helpful to you in gaining a better picture of the structures discussed in class. The program driving instructions have been loaded on all of the PCs in the open area to the right as you enter the library. The CD will not run on MacIntosh computers.

Name of the CD: Interactive Atlas of Human Anatomy

Directions for Use:

- 1. Check ou the CD from the desk, it is under the course #ANA209
- 2. Log into the computer with your SNDS account.
- 3. Insert the CD in the CD driver of the computer.
- 4. Double click on the CD icon on the computer screen.
- 5. Double click on the icon "setup.exe"
- 6. Change the "Destination Directory" to D:\ATLAS
- 7. Select "Full install all files"
- 8. Answer yes to: Do you want to create program manager groups?
- 9. Double click on FN-ATLAS icon

The menu allows you to select organs or systems, labeled or unlabeled and to navigate through the atlas.

Keep the CD in the computer while using it.

When finished, remove the CD and log out.

ANA 209-001 Principles of Human Anatomy

Monday, Wednesday, and Friday 1-1:50 Room: NURS 201

Course Director

Dr. Pamela Stein

Links to this syllabus, answers to learning objectives, and grades are available on the UK Blackboard site: https://elearning.uky.edu/

Course Description

The structure of and function of the human body will be examined at various levels: cellular, tissues, and organ systems. The gross anatomical arrangement of the body will be studied in a system-by-system format relating structure to function and the fundamentals of human embryology/malformation with adult anatomy. The central nervous system will be emphasized.

Course Objectives

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The course will provide the opportunity to learn basic knowledge about the functional components of the human body, their development, and anatomical relationships. The course briefly covers the principal cells and tissues of the body. The emphasis of the course is system anatomy with a focus on the central nervous system, embryology, and an introduction to function (physiology).

ANA 209 Fall 2006		
Date	Lecture Number	Topic
8/23/06	1	Introduction to Anatomy
8/25/06	2	Tissues
8/28/06	3	Integumentary System
8/30/06	4	Cartilage
9/1/06	5	Bone
9/4/06	NO CLASS	Labor Day
9/6/06	6	Bone Formation
9/8/06	7	Skeleton
9/11/06	8	Articulations*
9/13/06	9	Muscular System I
9/13/00	Review Session	5:00 p.m. ((Room MN 263)
9/15/06	EXAM 1*	20% of final grade (Rooms Nurs 201 and Nurs 115)
9/18/06	10	Muscular System II
9/20/06	11	Nervous System I
9/22/06	12	Nervous System II
9/25/06	13	Nervous System III
9/27/06	14	Nervous System IV
9/29/06	15	Nervous System V
10/2/06	16	Nervous System VI & Referred Pain**
10/4/06	17	Special Senses
	Review Session	5:00 p.m. (Room MN 263)
10/6/06	NO CLASS	Fall Break
10/9/06	EXAM 2**	20% of final grade (Rooms Nurs 201 and Nurs 115)
10/11/06	18	Cardiovascular System I
10/13/06	19	Cardiovascular System II
10/16/06	20	Cardiovascular System III
10/18/06	21	Lymphatic System I
10/20/06	22	Lymphatic System II
10/23/06	23	Endocrine System***
10/25/06	24	Respiratory System I
	Review Session	5:00 p.m. (Room MN 263)

10/27/06	EXAM 3***	20% of final grade (Rooms Nurs 201 and Nurs 115)
10/30/06	25	Respiratory System II
11/1/06	26	Digestive System I
11/3/06	27	Digestive System II
11/6/06	28	Digestive System III
11/8/06	29	Digestive System IV
11/10/06	30	Urinary System I
11/13/06	31	Urinary System II****
11/15/06	32	Male Reproductive System I
	Review Session	5:00 p.m. (Room MN 263)

11/17/06	EXAM 4***	20% of final grade (Rooms Nurs 201 and Nurs 115)
11/20/06	33	Male Reproductive System II
11/22/06	34	Female Reproductive System I
11/24/06	NO CLASS	Thanksgiving
11/27/06	35	Female Reproductive System II
11/29/06	36	Fertilization and Implantation
12/1/06	37	Embryonic Development
12/4/06	38	Embryonic and Fetal Development
12/6/06	39	Fetal Development and Parturition Course Evaluations
12/8/06	Review Session	NURS 201
12/13/06	FINAL EXAM 1-3	20% of final grade (Rooms Nurs 201 and Nurs 115)

Textbooks

Text/Lecture Packet - essential to the course; includes text, notes, atlas, CDs; available at Kennedy's and the UK Bookstore

Faculty

Course Director: Dr. Pam Stein

UKMC MN 210 Phone: 323-5591

Email: pam.stein@uky.edu

Office Hours

I am *generally* available to answer questions related to the course during times when I am not teaching other courses or conducting research. While an appointment is not necessary, I would advise making an appointment for a mutually convenient time. Making an appointment in advance will save you undue trips to my office when I am unavailable to assist you or are not there. This can be done by emailing me pam.stein@uky.edu to request a meeting.

In addition, I am typically available immediately prior to class for brief consultation before lecture starts. No appointment is necessary for this limited time.

Grading

There will be five examinations during the course. Each exam will be worth 20% of your total grade. Each exam will be based on material only from the last exam to the present. The final exam is comprehensive only in as much as it involves the lectures on embryology. These lectures deal with the formation and development of systems already studied in various body regions and therefore is somewhat cumulative in that regard. Exams will be multiple formats, consisting of multiple choice, true/false, mix and match, diagram labelling, and fill-in-the-blank. Regardless of the number of points per exam, the mark will be reduced to 20% of your total grade.

You are encouraged to look over your exam by visiting the course director's office (UKMC MN 210). Your exams will not be returned to you, the exam booklet will be kept in Dr. Stein's office for your perusal.

You may be required to produce a picture I.D. before, during or upon turning in examinations if asked to do so.

Due to the large size of this class, other rooms will be used to divide the class during examinations. It is your responsibility to know where you are taking the exams. A list of students who will be taking the exam in a room other than our 'normal' lecture hall will be posted at the beginning of lecture several days prior to exam day and on Blackboard. IF YOU TAKE THE EXAM IN THE WRONG ROOM IT WILL NOT BE COUNTED.

*Final Grades for the course will be awarded as follows:

A = 90-100%

B = 80 - 89.5%

C = 70 - 79.5%

D = 60 - 69.5%

E = 0 - 59.5%

*At the end of the course a curve may be applied if the class average is below a 75%. Do not count on this curve to get a grade, the class average will normally be at or above 75%.

Attendance at all five exams is required and unless a valid excuse is presented for being absent a grade of '0' (zero) will be awarded for that exam. Make-up exams will be arranged for students with valid excuses. The type of make-up exam will be determined by the instructor and may include short answer, essay, true/false and multiple choice questions. A valid excuse for an absence must be in compliance with the University Senate rule on excused absences. Briefly they are:

- Illness of the student or serious illness of a member of the student's immediate family. A note from the Health Service stating you visited or were treated there is not appropriate verification. The physician's name must be presented along with permission to contact that individual to verify you were too ill to take the examination.
- 2. The death of a member of the student's immediate family.

 Appropriate verification will be requested.
- 3. Trips for members of student organizations sponsored by an academic unit, trips for university classes, and trips for participation intercollegiate athletic events. When feasible the student must notify the instructor **prior to** the occurrence of these absences. In no case will such notification occur more that one week after the absence. Formal notification form appropriate university personnel will be required to verify the student's participation in such trips.
- Major religious holidays. Students are responsible for notifying the instructor in writing of anticipated absences due to observance of such holidays no later than the last day for adding a class.

How to be SUCCESSFUL in this Course

There is an **ART** to studying the information in this course and being successful on the exam. For smart studying you need to **A**bsorb, **R**etain, and **T**est yourself.

After **each** class, review the notes. If you don't review today's lecture for several weeks, you will have forgotten 80 to 95% of it. After reviewing the day's notes, **summarize** what the lecture was about.

Be sure there is nothing in the notes that you don't understand. Can you answer the *Learning Objectives*? If there is material you don't understand, or *Learning Objectives* you can't answer, see Dr. Gould or one of the other course lecturers before or after the next lecture. New material often builds on a base of pre-existing material. If you don't understand the basics, the following material will be difficult to understand.

When it comes time to "cram" before the exam, a significant amount of material you don't understand will cause you to panic. This works against effective assimilation of material.

Understand the material, don't simply memorize facts. If you don't understand the concept, and are unable to explain it to yourself or others, memorizing individual facts about it will not help you pass the exam. Often questions are designed to indicate whether you understand the basic concepts involved in the structure and function of the organ system or process.

Multiple choice and short answer/fill-in-the-blank questions tend to test major concepts while mix and match questions test definitions and specific functions. Be sure you can list specific cells and their functions of each system after you first explain the major concepts of its organization and structure as it relates to its function.

Review all your notes at regular intervals.

*There are NO phones or beepers permitted in ANA 209 lectures. The instructor reserves the right to deduct points if ar beeper or phone rings/buzzes/chimes/whistles/etc. in class

Anatomy Models in HSLC 602f

Model #	Description
1	full body muscle model
2	sagittal head with facial muscles and brain
3	none
4	hip joint
5	shoulder joint
6	knee joint
7	cross section of thick and thin skin (macroscopic)
8	lumbar spine with disks and nerve roots, sacrum, ruptured disk
9	abdominal cavity showing posterior body wall, peritoneal
	attachments, positions of kidneys and major vessels
10	opened thorax, diaphragm, pericardium; lungs removed, muscles of
	thoracic wall
11	opened thorax, pleura and lungs in place. Subclavian arteries and
	veins passing from thorax into axilla
12	complete vertebral column and spinal cord with nerve roots
13	cervical vertebra with cord and meninges, also includes vertebral
	arteries
14	model of ear with ossicles, cochlea and semicircular canals
15	rubber/plastic sagittal head with removable half brain. Brain shows
	lobes and major gyri. Also, nasal, oral, and laryngeal pharynx, hard
	and soft palates; anterior portion of tongue removed.
16	large dissected heart showing heart chambers and great vessels
17	lungs, trachea, larynx, heart, and diaphragm
18	none
19	stomach, duodenum, pancreas, and related vessels

20	pancreas, kidneys, duodenum, spleen, and related vessels
21	kidney, opened, showing cortex, medulla, and pelvis. Also parts of
	nephron are shown
22	kidneys, ureters, bladder, male reproductive organs and vessels
23	dissected midline view of the nasal cavity and the nasopharynx
24	female reproductive organs and perineum
25	female pelvis and reproductive organs
26	(a,b,c) development of face during the second intrauterine month
27	embryo and uterus at end of first intrauterine month
28	embryo and uterus at end of second intrauterine month
29	fetus and uterus at end of third intrauterine month
30	external features o fa two month embryo
31	male reproductive organs
32	cervical spine, spinal cord and vertebral arteries
33	plastic brain
34	none
35	synovial joint - knee
36	none
37	skull (bone)
38	skeleton

Computer CD on Human Anatomy

An easy to use CD with numerous illustrations of many aspects of human anatomy has been made available to you in the health science learning center library. It is well organized and easy to pull up an illustration of specific organs or systems. This may be helpful to you in gaining a better picture of the structures discussed in class. The program driving instructions have been loaded on all of the PCs in the open area to the right as you enter the library. The CD will not run on the MACs.

Name of the CD: Interactive Atlas of Human Anatomy

Directions for Use:

- 1. Check ou the CD from the desk, it is under the course #ANA209
- 2. Log into the computer with your SNDS account.
- 3. Insert the CD in the CD driver of the computer.
- 4. Double click on the CD icon on the computer screen.
- 5. Double click on the icon "setup.exe"
- 6. Change the "Destination Directory" to D:\ATLAS
- 7. Select "Full install all files"
- 8. Answer yes to: Do you want to create program manager groups?
- Double click on FN-ATLAS icon

The menu allows you to select organs or systems, labelled or unlabelled and to navigate through the atlas.

Keep the CD in the computer while using it.

When finished, remove the CD and log out.

