

Human Anatomy & Embryology

Medical Education Committee

16 October 2007

HAE

- **Fall & winter course, DMS 1**
 - August 17 – November 19
 - November 30 – March 7
- **Fall term: 40 hrs lecture, 46 hrs lab**
 - Embryology → upper extremity → thorax → abdomen → pelvis
- **Winter term: 20 hrs lecture, 45 hrs lab**
 - Lower extremity → head/neck → neuroanatomy
- **Embryology incorporated throughout the two trimesters, by system**
- **Lab: dissection, prosections**
- **Clinical correlation lectures**

HAE

- **Course director: Virginia T. Lyons, PhD**
- **Faculty: 3 surgeons, 1 neurologist, 3 PhD anatomists**
 - Dr. Brian Catlin, Dr. Arnold Fabricant, Dr. John Lyons, Dr. Michael Price, Dr. Rand Swenson,
- **Instructors:**
 - Dr. Nancy McNulty, Dr. Kathleen Muldoon
- **Resources**
 - Textbooks
 - Blackboard: Announcements, notes, slides, exercises, quiz information, syllabus/schedule, texts & equipment, faculty, links, references, etymology
 - Website: <http://www.dartmouth.edu/~anatomy/index.html>

HAE I: Instructors

- **“The instructors were ALL so eager to teach and were incredibly available for questions. It is wonderful to be in such a good learning environment.”**
- **“By and large, the best things about this class were the instructors. They are all excellent and clearly care very much about us and how well we mastered the material**

HAE I: Resources

- . “Lab manual is great. Very good learning tool.”
- “Gray's described relationships and highlighted important concepts (i.e. hernias, quadrangular space, etc.) while Netter's gave pictures detailing spatial relationships.”
- Students appreciated the web resources.
 - “Very useful, especially for finding embryology animations. The list was pretty comprehensive and didn't seek out any others.”

HAE I: Embryology

- **Difficult subject for students**
 - Appreciated the revised format, but felt that the material was difficult to master
 - Many suggested alternative learning methods for teaching Embryology
 - “Embryology should be presented differently, for example, with animations that continue to reinforce what mature structures come from which areas of the embryo
 - “I benefited a lot from the embryology animations linked on the course webpage. Incorporate more animations of this type into lectures”

HAE I: Labs

- **Very enthusiastic about the labs.**
 - “All professors were tremendously helpful in the laboratory.”
- **Students expressed appreciation for the DMS II Open Lab.**
- **They gained a lot from the prosecutions and from rotating, seeing different cadavers with different pathologies.**

HAE I: Labs

- **Praise was given for the two assistants, Kathleen Muldoon and Julianne Mann.**
 - **“Very knowledgeable and insightful and had great ways to remember certain tricky areas of anatomy.”**
“They were great! So helpful!”
- **There was some mention of difficulty with the emotional aspect of working with cadavers for the first time.**
- **Also mentioned was the desire for the entire class to be formally taught how to use and hold the dissection tools.**

HAE I: Quizzes, Exams, Grading

- Most students responded that the quizzes and exams “were difficult but fair.”
- They were appreciative of the turn around time for quizzes.
 - “I was really impressed on how quickly the lecture quizzes were graded and returned; Very professional.”

HAE I: Quizzes, Exams, Grading

- **Mixed feelings with regard to the oral lab quizzes.**
 - **Helped them to keep up with the material.**
 - **Overly stressful.**
 - **“I dreaded the quizzes. It's one thing to not know the answer on a written quiz, but it's another to be standing there speechless while everyone waits for you to give an answer. I get nervous just thinking about it.”**
 - **“Stop the lab quizzes. I can't see how they actually help. It would be fine to have a "discussion" as some of the professors have chosen to do prior to dissection.”**
 - **“The lab quizzes should be a group effort not individual.”**

HAE II: Instructors/Resources

- **Extremely positive evaluations: impressed by the faculty's dedication to helping students learn the material.**
 - Hands on learning
 - Consistency of faculty
- **Tools: Excellent reviews of lab manuals, notes, demonstrations**
 - laryngoscope demonstration
 - skull video: extremely helpful, though some commented that it would have been most useful “prior to starting the head unit”

HAE II: Embryology

- Suggested change in timing of head embryology and cranial nerves, suggesting it be presented earlier in the course.
 - “Move the embryology of the head so that it is taught before head and neck so that innervations make much more sense.”
 - “Starting with cranial nerves would have provided a structure for us to build on. I think it definitely would have been helpful teaching the head embryology earlier. Understanding the arches would have helped put a lot together before.”

HAE II: General Suggestions

- **Standardization of lecture notes.**
 - maintains continuity in the material being presented
 - currently some lecturers offer more detailed notes than others
- **Website under-utilized; not functioning to its fullest potential.**
 - “Do a better job of promoting the online content - e.g. better integration of HAE website with Blackboard website, add links to relevant HAE learning tools on the PowerPoint slides, etc. Thought this was a fantastic tool, but unfortunately I discovered it very late in the course.”

HAE I: Statistics Summary

- **General overview**

- Overall satisfaction: “good” to “very good,”
- ↑ 2005/2006; ↑ DMS I mean all courses
- Embryology: slightly below “good”
 - below the Year 1 mean.
- ~ 87% : pace of the course was about right
 - up from 73% last year
 - 13% lectures are too rushed, too dense.
- Highest rated text: Netter Atlas;
 - lowest: Mitchell and Sharma (Embryology text).

HAE I: Statistics Summary

- All Lecturers: “good” to “very good” scores for overall effectiveness, and many of them scored above the Year 1 mean
 - Scores for “learning environment created by lecturers”: comparably high in most cases

HAE I: Statistics Summary

- Labs: “very good” to “excellent” range. These scores were above last year’s means and the Year 1 means.
- Exams, quizzes, grading policy:
 - grading policy was presented clearly
 - clarity of quiz, exam and lab exam questions, and their pertinence to the course content scores: “good” to “very good” range
 - Higher than previous year’s mean

HAE I: Statistics Summary

- Study aids:
 - “Pink Foam Pelvis” review led by Dr. Lyons
 - DMS II prosecutions
 - Lecture slides on Blackboard
 - very useful (“very good” to “excellent”)
 - Course website and UNC website rated
 - “good” to “very good”

HAE I: Statistics Summary

- Core competencies
 - “knowledge base” highest, followed by “clinical skills”, “professionalism”, “life-long learning”, “communication”, and “working in the broader health care practice.”
 - All means were in the “very good” range.

HAE II: Statistics Summary

- Overall satisfaction : “very good” to “excellent”
 - substantially > mean for Year I courses
- Embryology : “good” to “very good”
- Overall effectiveness of lectures, syllabus and the intellectual challenge of the course: “very good”
- Ability to assist them in acquiring competency in the field: “very good” to “excellent.”
 - All scores in this section > Year I mean.
- Pace of the course: 95%: “about right.”

HAE II: Statistics Summary

- **Lecturers & lecture handouts:**
 - “good” to “excellent” (at or above mean Year 1)
- **Labs: “very good”** , increased over previous year
 - above the Year 1 mean
 - number and availability of instructors very good.”

HAE II: Statistics Summary

Study Aids

- **Prosections, Skull DVD review:**
 - “good” to “very good”
- **lecture notes & slides on blackboard:**
 - “very good” to “excellent”
- **Utilization of teaching module website:**
 - Don't know/NA: 43% aware of website, 13% unaware of website

HAE II: Statistics Summary

Exams, Quizzes, Grading

- **Grading policy: clearly presented**
- **Quiz/exam questions: reflect course content/emphasis**
 - **“very good”**
 - **Above last year’s mean**
 - **Substantially above Yr 1 mean**

HAE II: Statistics Summary

Core Competencies

- Rank:
 - “knowledge base” --> “clinical skills,” --> “professionalism,” --> “communication” --> “life-long learning,” --> “working in the broader health care practice.”
- All means : “very good” range.

Human Anatomy & Embryology

- **Well respected, well taught course DMS year 1**
- **Valuable resources**
- **Embryology integration thought to be an improvement by most, but still presents a challenge to students**