Human Anatomy & Embryology

Medical Education Committee

16 October 2007
• 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 prosections 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.”
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 prosections
  – 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

• Proscections, 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:

• 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