Program Request

Anatomy

Fiscal Unit/Academic Org: Biomedical Informatics - D2510
Administrating College/Academic Group: The College of Medicine
Co-administering College/Academic Group: Converted with minimal changes to program goals and/or curricular requirements (e.g., sub-plan/specialization name changes, changes in electives and/or prerequisites, minimal changes in overall structure of program, minimal or no changes in program goals or content)
Current Program/Plan Name: Anatomy
Proposed Program/Plan Name: Anatomy
Program/Plan Code Abbreviation: ANATOMY-PH
Current Degree Title: Doctor of Philosophy

Credit Hour Explanation

<table>
<thead>
<tr>
<th>Program credit hour requirements</th>
<th>A) Number of credit hours in current program (Quarter credit hours)</th>
<th>B) Calculated result for 2/3rds of current (Semester credit hours)</th>
<th>C) Number of credit hours required for proposed program (Semester credit hours)</th>
<th>D) Change in credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total minimum credit hours required for completion of program</td>
<td>120</td>
<td>80.0</td>
<td>80</td>
<td>0.0</td>
</tr>
<tr>
<td>Required credit hours offered by the unit Minimum</td>
<td>51</td>
<td>34.0</td>
<td>34</td>
<td>0.0</td>
</tr>
<tr>
<td>Maximum</td>
<td>96</td>
<td>64.0</td>
<td>64</td>
<td>0.0</td>
</tr>
<tr>
<td>Required credit hours offered outside of the unit Minimum</td>
<td>24</td>
<td>16.0</td>
<td>16</td>
<td>0.0</td>
</tr>
<tr>
<td>Maximum</td>
<td>69</td>
<td>48.0</td>
<td>46</td>
<td>0.0</td>
</tr>
<tr>
<td>Required prerequisite credit hours not included above Minimum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

Program Learning Goals

*  

Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

Is this a degree program (undergraduate, graduate, or professional) or major proposal? Yes

Does the degree program or major have an assessment plan on file with the university Office of Academic Affairs? No

DIRECT MEASURES (means of assessment that measure performance directly, are authentic and minimize mitigating or intervening factors)

Standardized tests

* Local comprehensive or proficiency examinations

Classroom assignments

* Embedded testing (i.e. specific questions in homework or exams that allow faculty to assess students' attainments of a specific learning goal)
  * Other classroom assessment methods (e.g., writing assignments, oral presentations, oral exams)

Evaluation of a body of work produced by the student

Anatomy - Page 1
- Practicum, internship or research evaluation of student work
- Capstone course reports, papers, or presentations

**Direct assessment methods specifically applicable to graduate programs**

- Candidacy exams
- Research proposals written and grants awarded
- Thesis/dissertation oral defense and/or other oral presentation
- Thesis/dissertation (written document)
- Publications

**INDIRECT MEASURES (means of assessment that are related to direct measures but are steps removed from those measures)**

**Surveys and Interviews**

- Student evaluation of instruction

**Additional types of indirect evidence**

- Job or post-baccalaureate education placement
- Outreach participation

**USE OF DATA (how the program uses or will use the evaluation data to make evidence-based improvements to the program periodically)**

- Meet with students directly to discuss their performance
- Analyze and discuss trends with the unit's faculty
- Make improvements in curricular requirements (e.g., add, subtract courses)
- Make improvements in course content
- Make improvements in course delivery and learning activities within courses
- Make improvements in learning facilities, laboratories, and/or equipment
- Periodically confirm that current curriculum and courses are facilitating student attainment of program goals

**Program Specializations/Sub-Plans**

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

**Pre-Major**

Does this Program have a Pre-Major? No

**Attachments**

- cover letter.pdf: Cover Letter
  (Letter from Program-offering Unit. Owner: Lee,Lisa)
- transition.pdf: Transition Plan
  (Transition Policy. Owner: Lee,Lisa)
- Course list.pdf: Courses
  (List of Semester Courses. Owner: Lee,Lisa)
- %COM Semester Conversion Letter 12 10 10.pd
  (Letter from the College to OAA. Owner: Lucey,Catherine Reins)

**Comments**

- Needs to have attachments 2 and 3 (if applicable) appended prior to College letter and approval. Thank you CRLucey (by Lucey,Catherine Reins on 12/08/2010 04:49 PM)
## Workflow Information

<table>
<thead>
<tr>
<th>Status</th>
<th>User(s)</th>
<th>Date/Time</th>
<th>Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submitted</td>
<td>Lee,Lisa</td>
<td>11/29/2010 10:08 AM</td>
<td>Submitted for Approval</td>
</tr>
<tr>
<td>Approved</td>
<td>Gould,Douglas J.</td>
<td>11/29/2010 10:26 AM</td>
<td>Unit Approval</td>
</tr>
<tr>
<td>Revision Requested</td>
<td>Lucey,Catherine Reinis</td>
<td>12/08/2010 04:40 PM</td>
<td>College Approval</td>
</tr>
<tr>
<td>Submitted</td>
<td>Lee,Lisa</td>
<td>12/09/2010 04:55 PM</td>
<td>Submitted for Approval</td>
</tr>
<tr>
<td>Approved</td>
<td>Gould,Douglas J.</td>
<td>12/10/2010 08:28 AM</td>
<td>Unit Approval</td>
</tr>
<tr>
<td>Approved</td>
<td>Lucey,Catherine Reinis</td>
<td>12/22/2010 03:43 PM</td>
<td>College Approval</td>
</tr>
<tr>
<td>Approved</td>
<td>Myers,Dena Elizabeth</td>
<td>12/27/2010 09:15 AM</td>
<td>GradSchool Approval</td>
</tr>
<tr>
<td>Pending Approval</td>
<td>Soave,Melissa A</td>
<td>12/27/2010 09:15 AM</td>
<td>CAA Approval</td>
</tr>
</tbody>
</table>
December 10, 2010

Randy Smith, PhD
Vice Provost, Curriculum & Institutional Relations
Office of Academic Affairs
203 Bricker Hall
CAMPUS

Dear Dr. Smith:

The College of Medicine submits for approval the following programs for semester conversion:

Baccalaureate Programs (School of Allied Medical Professions):
1) Athletic Training
2) Biomedical Sciences
3) Health Information and Management Systems
4) Health Sciences
5) Medical Dietetics
6) Medical Technology
7) Radiologic Sciences and Therapy with subprograms in Radiation Therapy, Radiography and Sonography
8) Respiratory Therapy

Minors:
1) Integrated Determinants of Health (School of Allied Medical Professions)
2) Anatomy (School of Biomedical Sciences, Dept. of Biomedical Informatics)

Masters Degree Programs:
1) Masters of Occupational Therapy (School of Allied Medical Professions)
2) MS in Allied Medical Professions (School of Allied Medical Professions)
3) MS in Anatomy (School of Biomedical Sciences, Department of Biomedical Informatics)
4) MS in Medical Sciences (College of Medicine)
5) MS in Pathology (School of Biomedical Sciences, Dept of Pathology)
6) MS in Pharmacology (School of Biomedical Sciences, Dept. of Pharmacology)

Doctoral Degree Programs:
1) Doctor of Physical Therapy [DPT] (School of Allied Medical Professions)
2) Doctor of Medicine [MD] (College of Medicine)
3) PhD in Health and Rehabilitation Sciences (School of Allied Medical Professions)
4) PhD in Integrated Biomedical Sciences [IBGP] (School of Biomedical Sciences)
5) PhD in Anatomy (School of Biomedical Sciences, Dept. of Biomedical Informatics)

Each program proposal has been carefully developed with considerable curricular review and appropriate unit approval; letters delineating the process and approval accompany each template. At the College level, all proposals have been reviewed and approved through the College’s Curriculum Review process. Accordingly, each program has developed a transition plan that will allow students that maintain good academic standing to complete their respective program without delay due to the semester conversion. These transition plans are included with each program template. The course templates for all courses have also been submitted for approval. Please contact me or Deborah S. Larsen, our semester conversion coordinator, with any questions; specific questions regarding individual templates may be directed through Dr. Larsen to the appropriate contact person. Contact information is as follows:

Catherine R. Lucey, MD, FACP
Phone: 688-3104
e-mail: Catherine.lucey@osumc.edu

Deborah S. Larsen, PhD
Phone: 292-5645
e-mail: Deborah.larsen@osumc.edu

Thank you for the review of these materials.

Sincerely,

[Signature]

Catherine R. Lucey, MD, FACP
Interim Dean and Vice Dean of Education
The Ohio State College of Medicine
January 25, 2011

Catherine R. Lucey, MD
Interim Dean and Vice Dean for Education
College of Medicine
260 Meiling Hall
CAMPUS

Dear Dr. Lucey:

On behalf of the School of Allied Medical Professions, I am pleased to submit the semester conversion plans for the following programs:

Certificates:
1) Health Information Management and Systems
2) Medical Technology – proposed name change to Medical Laboratory Sciences
3) Respiratory Therapy

Baccalaureate (BS in Allied Health)
1) Athletic Training – degree change to BS in Athletic Training
2) Biomedical Sciences
3) Health Information Management and Systems
4) Health Sciences
5) Medical Dietetics
6) Medical Technology – proposed name change to Medical Laboratory Sciences
7) Radiation Therapy
8) Radiography
9) Respiratory Therapy

Graduate
1) Masters of Occupational Therapy (MOT)
2) Masters of Science in Allied Medical Professions (MS)
3) Doctor of Physical Therapy (DPT)
4) Doctor of Philosophy in Health and Rehabilitation Sciences (PhD)

Minor:
1) Integrated Determinants of Health
The conversion of each of these programs was initiated through two School-wide retreats, comprehensive curriculum mapping, conducted by our Executive Committee, and multiple working groups within and between programs. Each curriculum was reviewed and revised consistent with current healthcare practice and, for many, their accreditation criteria. For the undergraduate programs, working groups revised and amended our elective core courses; it was recommended that each program enroll students in the core courses rather than teach individual unit courses, which was done by all programs, consistent with content needs. Our entry-level graduate programs (Occupational Therapy and Physical Therapy), also developed a core evidence-based practice sequence to encourage collaborative problem-solving among students in those two programs. One course, AM 5000 “Strategies for Interprofessional Case Management”, is a new elective course that will provide interdisciplinary case management exposure to students from all of the programs in the School; due to the high number of credits within each curriculum, this course is recommended but not required. Each curriculum was approved by the faculty within the respective program and by the School’s curriculum committee on the following dates:

1) Respiratory Therapy – approved 7/14/2010
2) Medical Technology – approved 8/5/2010
3) Medical Dietetics – approved 8/11/2010
4) Radiologic Sciences & Therapy – approved 8/11/2010
5) Occupational Therapy – approved 8/11/2010
6) Biomedical Sciences – approved 8/18/2010
7) Physical Therapy – approved 8/19/2010
8) Athletic Training – approved 9/15/2010
9) MS in Allied Medicine – approved 9/15/2010
10) PhD in Health and Rehabilitation Sciences – approved 9/15/2010
11) Health Information Management and Systems – approved 9/22/2010

In reviewing the clinical experiences of students in each program, it was noted that there was no standard credit hour allocation for the full or part-time clinical experiences. Our Executive Committee voted unanimously to impose a consistent credit hour allocation, based on the following formula: Full-time (40hr/week, 14 weeks) = 12 credits for undergraduate and 8 for graduate programs; 20 hr/week = 6 credits for undergraduate, 4 for graduate; 10 hr/wk = 3 credits for undergraduate and 2 for graduate; and so on. Some programs have implemented 7 week clinical experiences that follow the same proportional allocation (i.e. 7 week, full time = 6 credits). This change often distorted the 2/3 conversion formula, since historically clinical experiences were under- credited; however, all programs were converted with minimal changes and have indicated such within their program templates.

In concert with the semester conversion, there are two program specific requests:

1) The Athletic Training program is requesting to change the degree awarded from Allied Health to Athletic Training to meet accreditation requirements;
2) The Medical Technology program is requesting to change the name of their program to Medical Laboratory Science, which is consistent with their licensure and accreditation recommendations.
March 11, 2011

Rationale for the Changes
The College of Medicine; Department of Biomedical Informatics; Division of Anatomy

The PhD and Master’s programs were converted without significant changes beyond every quarter credit hours being transitioned at 2/3 credits per the CAA guideline. The only exception to this formula was the Seminar in Anatomy course which is offered for 1 credit hour per quarter. We proposed to continue to offer 1 credit hour per semester for this course after the conversion as the longer duration of each semester requires a small increase in course work thus justifying keeping the course at 1 credit hour.

The Graduate Minor in Anatomy program was converted with minimal changes - after the semester conversion, the program will require an additional four semester credit hours -14 total. This change is proposed to ensure that sufficient anatomical knowledge is gained by students seeking a graduate minor in anatomy. The proposed change will require students to take at least two core courses in Anatomy, one of which will necessarily be Anatomy 6900 (8 credit hour Human Anatomy for Graduate Students). Requiring only 10 credit hours, a student could conceivably only take Anatomy 6900 and one elective, which is not an adequate amount of Anatomical Science content to gain mastery in depth and breadth. Other graduate minor programs at OSU require at least two core courses and several electives with total quarter credit hour requirements ranging between 18 and 23 (12 and 15 in semester credit hours). We believe our proposal for a minor change to require 14 credit hours to earn a Graduate minor in Anatomy is necessary for sufficient knowledge transfer.

Signed on behalf of the Graduate Studies Committee,

Lisa MJ Lee
Chair, Graduate Studies
# PhD in Anatomy

<table>
<thead>
<tr>
<th>Department</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 6900</td>
<td>Human Anatomy for Graduate Students</td>
<td>8 (12)</td>
</tr>
<tr>
<td>(Anat 712)</td>
<td>(Medical Gross Anatomy)</td>
<td></td>
</tr>
<tr>
<td>ANAT 6700</td>
<td>Human Histology</td>
<td>4 (6)</td>
</tr>
<tr>
<td>(Anat 700)</td>
<td>(Human Histology)</td>
<td></td>
</tr>
<tr>
<td>ANAT 6600</td>
<td>Human Embryology</td>
<td>2 (3)</td>
</tr>
<tr>
<td>(Anat 710)</td>
<td>(Human Embryology)</td>
<td></td>
</tr>
<tr>
<td>ANAT 6800</td>
<td>Human Neuroanatomy</td>
<td>4 (7)</td>
</tr>
<tr>
<td>(Anat 716)</td>
<td>(Human Neuroanatomy)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Seminar in Anatomy (minimum of 6 hours)</strong></td>
<td></td>
</tr>
<tr>
<td>ANAT 7891</td>
<td>Seminar in Anatomy</td>
<td>1 (1)</td>
</tr>
<tr>
<td>or equiv</td>
<td>(Seminar in Anatomy)</td>
<td></td>
</tr>
<tr>
<td>(Anat 850)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Advanced courses in Anatomy at the 7000 level or higher (minimum of 10 hours)**

**Graduate coursework relevant to the degree outside the department (minimum of 14 hours)**

**Graduate Research hours (minimum of 30 hours)**

<table>
<thead>
<tr>
<th>Department</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 6193</td>
<td>Research</td>
<td>2-5 (2-7)</td>
</tr>
<tr>
<td>or 8999</td>
<td>(Research)</td>
<td></td>
</tr>
<tr>
<td>(Anat 693 or 999)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Statistics courses approved by the adviser (minimum of 2 hours)**

**Minimum hours for program** 80

# MS in Anatomy

<table>
<thead>
<tr>
<th>Department</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 6900</td>
<td>Human Anatomy for Graduate Students</td>
<td>8 (12)</td>
</tr>
<tr>
<td>(Anat 712)</td>
<td>(Medical Gross Anatomy)</td>
<td></td>
</tr>
<tr>
<td>ANAT 6700</td>
<td>Human Histology</td>
<td>4 (6)</td>
</tr>
<tr>
<td>(Anat 700)</td>
<td>(Human Histology)</td>
<td></td>
</tr>
<tr>
<td>ANAT 6600</td>
<td>Human Embryology</td>
<td>2 (3)</td>
</tr>
<tr>
<td>(Anat 710)</td>
<td>(Human Embryology)</td>
<td></td>
</tr>
<tr>
<td>ANAT 6800</td>
<td>Human Neuroanatomy</td>
<td>4 (7)</td>
</tr>
<tr>
<td>(Anat 716)</td>
<td>(Human Neuroanatomy)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Seminar in Anatomy (minimum of 4 hours)</strong></td>
<td></td>
</tr>
<tr>
<td>ANAT 7891</td>
<td>Seminar in Anatomy</td>
<td>1 (1)</td>
</tr>
<tr>
<td>or equiv</td>
<td>(Seminar in Anatomy)</td>
<td></td>
</tr>
<tr>
<td>(Anat 850)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Research hours for thesis (Plan A) (minimum of 8 hours)**

<table>
<thead>
<tr>
<th>Department</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 6193</td>
<td>Research</td>
<td>2-5 (2-7)</td>
</tr>
<tr>
<td>or 8999</td>
<td>(Research)</td>
<td></td>
</tr>
<tr>
<td>(Anat 693 or 999)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Cognate area courses agreed upon in M.S. plan of study for non-thesis (plan B) (minimum of 8 hours)**

**Minimum hours for program** 30
Graduate Minor in Anatomy

<table>
<thead>
<tr>
<th>Department</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 6900 (Anat 712)</td>
<td>Human Anatomy for Graduate Students (Medical Gross Anatomy)</td>
<td>8 (12)</td>
</tr>
<tr>
<td>ANAT 6700 (Anat 700)</td>
<td>Human Histology (Human Histology)</td>
<td>4 (6)</td>
</tr>
<tr>
<td>ANAT 6600 (Anat 710)</td>
<td>Human Embryology (Human Embryology)</td>
<td>2 (3)</td>
</tr>
<tr>
<td>ANAT 6800 (Anat 716)</td>
<td>Human Neuroanatomy (Human Neuroanatomy)</td>
<td>4 (7)</td>
</tr>
</tbody>
</table>

**Minimum hours for program**: 14

**Contents in ( ) refer to course number, name and credit hours under quarter system.**
November 29, 2010

Transition Plan
The College of Medicine; Department of Biomedical Informatics; Division of Anatomy

The Division administration, staff, and faculty have made considerable efforts to assure the timely progression of students enrolled during the semester transition so that students who maintain good academic standing and follow the outlined curricula will be held harmless.

Course Related Issues: In the current quarter system, students take four core courses, Gross Anatomy, Neuroanatomy, Embryology and Histology in the first year in a staggered manner. The program transition will align the courses better, such that students will take Gross Anatomy and Neuroanatomy during the Autumn semester and Histology and Embryology in the Spring semester. When the semester transition takes effect, students who started the program under the quarters system will have already taken the core courses, therefore only have required elective courses remaining which are varied and flexible. No bridge course or doubling of course work is expected.

Advising: Our PhD program in Anatomy is approximately four-years in duration, so students admitted for Autumn 2009 or later will complete the program under the semesters system; however, due to the flexible nature of the courses and graduation time-line, semester conversion will have minimal effect on our students. The Graduate Studies Chair is advising all current and potential applicants to consider the semester curriculum and its impact. Our MS and PhD students will be provided individual advising to assure appropriate academic progress. Additionally, the semester conversion and its impact on courses and the graduate program are regularly discussed in monthly faculty meetings to advise the faculty and staff.

Program Progression Issues:
1. Academic: Currently all graduate students in Anatomy must earn a B or better and have a cumulative GPA of 3.0 or higher to be in good academic standing. A grade below a B in any of the four core courses may require the student to retake the failed course in the next academic year under the semester system, potentially delaying program completion. For students who do not meet the academic standards of the Graduate School and are placed under academic probation, the Graduate Studies Committee will hold an advisory meeting.
2. Leaves of Absence: currently students may request a LOA at anytime during the academic year and then rejoin the program at the same point in the curriculum one-year later to complete the program. After the conversion, students will be advised individually to ensure resumption of the course work at an appropriate time. Students requesting a LOA will also be counseled on the possible consequences of that decision.
3. Every effort will be made to avoid unnecessary requirements for students in situations mentioned above. Fortunately, these issues occur rarely in the Anatomy programs, so few students are expected to be impacted by either issue.

Signed on behalf of the Graduate Studies Committee,

Lisa MJ Lee
Chair, Graduate Studies