March 15, 2002

Douglass S. Kalika, Ph.D., Chair
Graduate Council
359 Patterson Office Tower
CAMPUS 0027

Dear Dr. Kalika:

At its meeting on February 26, 2002, the Academic Council for the Medical Center approved, and recommends approval by the Graduate Council, for the proposal from the College of Medicine to change ANA 536, Human Embryology (An Abbreviated Course).

Thank you for your attention to this request.

Sincerely,

Phyllis P. Nash, Ed.D.
Associate Vice President for Academic and Student Affairs

 attachments

c: Emery A. Wilson, M.D.
   Lois Nora, M.D.
   Jacque Hager
   Cindy Todd
January 8, 2002

MEMORANDUM

TO:      James W. Holsinger, Jr., M.D.
           Chair, Academic Council for the Medical Center

FROM:    Emery A. Wilson, M.D.
           Dean and Associate Vice President for Clinical Services

RE:      Major Course Application(s)

The Faculty Council of the College of Medicine has approved and submits for your consideration and approval the following major course application(s):

ANA 536 – Human Embryology (An Abbreviated Course)
Description: Increase in lecture hours changing the credit hours from 1 to 2
Justification: The course has been strengthened to enhance the basic medical science background of dental students.
January 8, 2002

MEMORANDUM

TO: Deans, Department Chairs and Members of the University Senate

FROM: Emery A. Wilson, M.D.
Dean and Associate Vice President for Clinical Services

RE: Major Course Change Application(s)

The Faculty Council of the College of Medicine has approved and submits for your consideration and approval the following major course change application(s):

ANA 536 – Human Embryology (An Abbreviated Course)
Description: Increase in lecture hours changing the credit hours from 1 to 2
Justification: The course has been strengthened to enhance the basic medical science background of dental students.
APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR & MINOR

1. Submitted by College of Medicine ___________________________ Date 08/22/01
   Department/Division offering course Anatomy and Neurobiology

2. Changes proposed:
   (a) Present prefix & number ANA 536  Proposed prefix & number Same
   (b) Present Title Human Embryology (An Abbreviated Course)
       New Title Same
   (c) If course title is changed and exceeds 24 characters (Including spaces), include a sensible title (not to exceed 24 characters) for use on transcripts:
   (d) Present credits: 1  Proposed credits: 2
   (e) Current lecture: laboratory ratio 14:0  Proposed: 24:0
   (f) Effective Date of Change: (Semester & Year) _________________

3. To be Cross-listed as: N/A ___________________________ Signature: Department Chair
   Prefix and Number

4. Proposed change in Bulletin description:
   (a) Present description (including prerequisite(s):
       A concise presentation of developmental mechanisms, early development of the embryo, and subsequent development of selected systems and regions of the body.
       Pre-req: Admission to the College of Dentistry.
   (b) New description:
       Same description. Change in lecture hours: Lecture = 24 hours, exams = 4 hours.

5. What has prompted this proposal?
   This course has been strengthened to enhance the basic medical science background of dental students and give them a more comprehensive, cohesive course in development.

6. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:
   Please see attached course syllabus.

7. What other departments could be affected by the proposed change?
   None

8. Will changing this course change the degree requirements in one or more programs?* □ Yes  ✔ No
   If yes, please attach an explanation of the change. *

9. Is this course currently included in the University Studies Program?  □ Yes  ✔ No
   If yes, please attach correspondence indicating concurrence of the University Studies Committee.

10. If the course is a 100-200 level course, please submit evidence (e.g., correspondence) that the Community College System has been consulted.

*NOTE: Approval of this change will constitute approval of the program change unless other program modifications are proposed.
11. Is this a minor change?  
   (NOTE: See the description on this form of what constitutes a minor change. Minor changes are sent directly from the Dean of the College to the Chair of the Senate Council. If the latter deems the change not to be minor, it will be sent to the appropriate Council for normal processing.)
   □ Yes  ☑ No

12. Within the Department, who should be consulted for further information on the proposed course change?

   Name: Dr. Pamela E. Knapp
   Phone Extension: 323-3517

   Signatures of Approval:

   Department Chair
   Dean of the College

   Curriculum Committee
   Undergraduate Council

   Faculty Council
   **Graduate Council

   **Academic Council for the Medical Center

   **Senate Council

   **If applicable, as provided by the Rules of the University Senate.

---------------------------

ACTION OTHER THAN APPROVAL

---------------------------

*******

The Minor Change route for courses is provided as a mechanism to make changes in existing courses and is limited to one or more of the following:

a. change in number within the same hundred series;
b. editorial change in description which does not imply change in content or emphasis;
c. editorial change in title which does not imply change in content or emphasis;
d. change in prerequisite which does not imply change in content or emphasis;
e. cross-listing of courses under conditions set forth in item 3.0;
f. correction of typographical errors. [University Senate Rules, Section III - 3.1]

Rev 11/98
### Lecture & Exam Schedule for ANA 536 - Human Embryology (An Abbreviated Course)

Dr. Pamela Knapp, Course Director

<table>
<thead>
<tr>
<th>Session</th>
<th>Date</th>
<th>Hours</th>
<th>Room</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M 10/29</td>
<td>2-3:50</td>
<td>MN463</td>
<td>Intro &amp; Early Development I</td>
</tr>
<tr>
<td>2</td>
<td>W 10/31</td>
<td>8-8:50</td>
<td>MN363</td>
<td>Early Development II</td>
</tr>
<tr>
<td>3</td>
<td>M 11/5</td>
<td>2-3:50</td>
<td>MN463</td>
<td>Placental Development / Nervous System Development I</td>
</tr>
<tr>
<td>4</td>
<td>W 11/7</td>
<td>8-8:50</td>
<td>MN363</td>
<td>Nervous System Development II</td>
</tr>
<tr>
<td>5</td>
<td>M 11/12</td>
<td>2-3:50</td>
<td>MN463</td>
<td>Limbs/Muscle/Skeletal Development</td>
</tr>
<tr>
<td>6</td>
<td>W 11/14</td>
<td>8-8:50</td>
<td>MN363</td>
<td>Development of Body Cavities</td>
</tr>
<tr>
<td>7</td>
<td>M 11/19</td>
<td>2-3:50</td>
<td>MN463</td>
<td>Diaphragm and Respiratory System</td>
</tr>
<tr>
<td>8</td>
<td>W 11/21</td>
<td>8-8:50</td>
<td>MN563</td>
<td>Heart Development I</td>
</tr>
<tr>
<td>9</td>
<td>M 11/26</td>
<td>2-3:50</td>
<td>?????</td>
<td>EXAM I (Lectures 1-7)</td>
</tr>
<tr>
<td>10</td>
<td>W 11/28</td>
<td>8-8:50</td>
<td>MN363</td>
<td>Heart Development II</td>
</tr>
<tr>
<td>11</td>
<td>M 12/3</td>
<td>3-4:50</td>
<td>?????</td>
<td>Vascular Development</td>
</tr>
<tr>
<td>12</td>
<td>M 12/10</td>
<td>3-4:50</td>
<td>?????</td>
<td>Urogenital Development I</td>
</tr>
<tr>
<td>13</td>
<td>W 12/12</td>
<td>8-8:50</td>
<td>MN463</td>
<td>Urogenital Development II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>WINTER BREAK</strong></td>
</tr>
<tr>
<td>14</td>
<td>W 1/2</td>
<td>8-8:50</td>
<td>?????</td>
<td>GI Development I</td>
</tr>
<tr>
<td>15</td>
<td>T 1/8</td>
<td>10-11:50</td>
<td>?????</td>
<td>GI Development II Pharyngeal Arch Development I</td>
</tr>
<tr>
<td>16</td>
<td>W 1/9</td>
<td>8-8:50</td>
<td>?????</td>
<td>Pharyngeal Arch Development II</td>
</tr>
<tr>
<td>17</td>
<td>T 1/15</td>
<td>10-11:50</td>
<td>?????</td>
<td>Development of Face and Palate</td>
</tr>
<tr>
<td>18</td>
<td>T 1/22</td>
<td>10-12</td>
<td>?????</td>
<td>EXAM II (Lectures 8, 10-17)</td>
</tr>
</tbody>
</table>
GENERAL COMMENTS:

This course is designed to give you a basic understanding of events which occur during the first 12 weeks of gestation and some general principles which guide development. It is not, by any means, a comprehensive course. The past ten years has been a period of rapid advancement in our understanding of early development, and the field continues to burgeon under the application of new molecular techniques.

Some caveats are appropriate here. First, embryology is really a study in 4-D (the 4th being change over time). One of the greatest difficulties most students have with the subject is visualizing multi-dimensional changes in structure. Careful attention should be paid to the figures in your text and lecture notes in order to understand changing spatial relationships between tissues. Secondly, the lecture material is based on the assumption that you have a basic understanding of Gross Anatomy and Histology terms and information. You may want to keep your texts from those courses for purposes of consultation.

While this course is certainly designed to give you information which will be useful in your day-to-day practices, it is also intended to facilitate your interactions with other health care providers. You will quickly realize that most of the developmental events we study are not directly applicable to dental and facial issues. No apologies are made for this! An understanding of how the entire body develops is something that ought to be significant to you as fully educated health care professionals.

In addition to being a required component of the curriculum, embryology is an endlessly fascinating subject. We hope that your study instills you with a sense of wonder at the intricate series of (usually) perfectly orchestrated events which result in the formation of a human being.

TEXT / LECTURE NOTES / COMPUTER PROGRAMS

The text for this course is "Langman's Medical Embryology", by T.W. Sadler, 8th edition. This book presents a concise picture of human development in a clear and understandable format. All references to a text in your notes refer to this book. There is an extensive set of lecture notes which are also required for this course. Both can be purchased at the bookstore.

You are expected to read the text material having to do with the lecture content before coming to class. Failure to do so will put you at a disadvantage. Embryology is a complicated topic, with a language all its own. The more that you familiarize yourself with the terminology and background information, the more that you will get out of the lectures. If you do not preview the material, you will not easily keep up with the lecture. There is no reason to bring your text to class, as diagrams pertinent to the lecture have been reproduced in your lecture notes. Lecture notes must be brought to class. There will be some material in the text which is not covered in the lecture. The limited lecture time will be used to highlight difficult material, or material not covered well in the text. You are responsible for all material in the lecture notes and the text material that pertains to it. If you are unclear as to whether something is required, please contact Dr. Knapp. Study objectives are provided for each lecture so that you can assess your understanding of the material. You should be able to understand and fully answer the study objectives.

You will also get a good deal of information from reviewing materials available to you in the computer labs. Especially useful will be "MacBaby" and "The Animated Embryo" which deal with very early events occurring in the 1st 3 weeks after fertilization. These computer programs are especially good at giving you a feel for tissue migration in multiple dimensions. The programs are in the Learning Sciences Center or Med Center Computer Labs, listed under ANA 814.
INSTRUCTOR HOURS:
All lectures are given by Dr. Knapp. Contact her if you do not understand something in the notes, the text, or a study objective. Her office is in MS207, and her laboratory in MS205/213. She is definitely available on weekdays between 9AM-6PM, often earlier or later, and sporadically on weekends. If you drop by her lab/office with a quick question she may be able to clear it up right then. If she is busy, you may have to make an appointment, but you will be seen ASAP. The office phone is 323-3517. It is also very convenient to handle questions via e-mail at peknapp@uky.edu.

We want you to understand this material and urge you to clarify your questions as early as possible. Misconceptions in embryology tend to snowball, and once a basic misconception becomes ingrained it can affect your understanding of many different systems. The longer you wait, the harder and more frustrating the clarification process will become.

EXAMINATIONS:
There are 2 written examinations. They are not cumulative. Each contributes 1/2 of your final grade. The exam schedule is given in the lecture schedule. Due to the nature of the material to be tested the exam formats vary. Questions will be predominantly multiple choice and short answer/essay.

Missed exams must be made up as soon as possible after the original exam date. The makeup exam can be either oral or written, at the instructor’s discretion. The policy regarding excused absences from exams follows university regulations. Acceptable excuses include:

a. Illness of the student or serious illness of a member of the student’s immediate family. A note from the Health Service stating that 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.

b. A death in the immediate family. Appropriate verification will be requested.

c. Events having to do with religious practices/major religious holidays. The student must notify the instructor in writing of an anticipated absence no later than the last day for adding a class.

d. Trips for members of student organizations sponsored by an academic unit, trips for university classes, and trips for participation in 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 than one week after the absence. Formal notification from appropriate university personnel will be required to verify student participation in such trips.

Excuses except for sudden illness or other emergencies require that Dr. Knapp be notified in advance (323-3517). Alternatively, the student should contact the Office of Student Affairs who will contact the instructor. Occasionally an excuse will be given for a reason which does not fall into the above categories, but these are at the discretion of the instructor and require advance planning.

GRADING POLICY
The final grade in this course is a cumulative total of your performance on Exams I-II. You are responsible for earning your grade. There will be no curving. In accordance with the College of Dentistry grading format, final marks will be recorded as A, B+, B, C, or unsatisfactory (U/E). The grade breakdown is as follows:

A - 90% or better
B+ - 84 to 89.9%
B - 76 to 83.9%
C - 70 to 75.9%
E - less than 70%
If you have concerns about your grade or think that a given answer is in error, you will have **one week** from the time that grades are announced to see Dr. Knapp about making changes. Do not wait until after the final exam to look for possible points from the first exam.

Interim grade reports throughout the semester are submitted to the *Academic Performance Committee* of the College of Dentistry. Academic performance in ANA 536 should not be taken lightly. **An unsatisfactory grade will require remediating the course in July of next year - IF the College of Dentistry's Academic Performance Committee (APC) and/or Dean of the College of Dentistry deem it allowable.** If remediation is allowed by the APC, it will take the form of a retake examination, and certain departmental regulations apply to all students enrolled in departmental courses:

Currently, all departmentally-administered anatomy courses for dental students utilize a passing grade of 70%. A student receiving a final grade between 59.5% and 69.5% will receive a failing grade, but be allowed to sit a retake examination in July of that academic year (if permitted by the APC and/or Dean of the College of Dentistry). A student obtaining less than 59.5% will receive a failing grade and any stipulations on retaking the course the following year will be dependent on the decisions of the APC and/or Dean of the College of Dentistry. In all courses the retake examination will be comprehensive and if a laboratory is offered, will include written and lab practical portions. The student must get a combined average of 70% in the retake to have successfully passed the retake exam. *Regardless of the grade obtained on this exam, the student will receive the lowest passing letter grade utilized by the college.*

**ATTENDANCE AND OTHER MATTERS:**

Attendance is critical to your success in this course. Since you are students in a professional school you are expected to realize this and to plan your lives accordingly. After the first lecture attendance will not be taken, but do not expect to make up lecture material with the instructor at a later time.

Each year there are a few students who find it necessary to talk during the lecture. This disrupts the learning process for other students. If you can be heard at the front of the lecture hall we will stop the lecture and ask that you leave.