1. Submitted by College of Health Sciences Date August 2, 2007
Department/Division offering course Clinical and Reproductive Sciences

2. Changes proposed:
   (a) Present prefix & number CLS 848 Proposed prefix & number CLS 848
   (b) Present Title Advanced Immunohematology
       New Title Molecular Techniques and Advanced Immunohematology
   (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: Molec. Tech. & Adv. Immunohem
   (d) Present credits: 3 Proposed credits: 3
   (e) Current lecture: laboratory ratio 1:0 Proposed: 1:0
   (f) Effective Date of Change: (Semester & Year) Spring, 2008

3. To be Cross-listed as: Na/
Prefix and Number __________________________ Signature: Department Chair

4. Proposed change in Bulletin description:
   (a) Present description (including prerequisite(s):
       This course emphasizes clinical interpretation and problem solving. Antibody identification, selection of blood components, transfusion complications, hemolytic disease of the newborn, autoimmune hemolytic anemia and quality assurance are included. Prereq: Admission to the Clinical Laboratory Sciences Program and CLS 838 or equivalent.
   (b) New description: An introduction to clinically relevant molecular techniques including electrophoresis, northern, Southern and western blotting, ELISA, and PCR; Advanced immunohematology focuses on transfusion therapy, apheresis and component therapy, hemolytic diseases, histocompatibility testing, and addresses federal regulation of blood banking.
   (c) Prerequisite(s) for course as changed: Admission to the Clinical Laboratory Sciences Program and CLS 838 or equivalent.

5. What has prompted this proposal? Need to include objectives for molecular techniques in the curriculum as required by NAACLS, the Clinical Laboratory Sciences accrediting agency.

6. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:
   Adding new objectives in molecular techniques to include an introduction to clinically relevant procedures including electrophoresis, northern, Southern and western blotting, ELISA and PCR.

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

8. Is this course applicable to the requirements for at least one degree or certificate at the University of Kentucky? Yes No

9. Will changing this course change the degree requirements in one or more programs? Yes X No
If yes, please attach an explanation of the change. (NOTE — If “yes,” program change form must also be submitted.)

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

UNIVERSITY OF KENTUCKY
APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR & MINOR

11. If the course is 400G or 500 level, include syllabi or course statement showing differentiation for undergraduate and graduate students in assignments, grading criteria, and grading scales.  □ Check here if 400G-500.

12. Is this a minor change?  
   □ Yes  □ No
   □
   (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.)

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

Name: Doris J. Baker, Ph.D. Phone Extension: 859-323-1100 X 80854

Signatures of Approval:

August 2, 2007

Date of Approval by Department Faculty 11/07/07

Date of Approval by College Faculty

*Date of Approval by Undergraduate Council

*Date of Approval by Graduate Council 12/18/07

*Date of Approval by Health Care Colleges Council (HCCC)

*Date of Approval by Senate Council

*Date of Approval by University Senate

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

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]
CLS 848
Molecular Techniques & Advanced Immunohematology
Syllabus
Spring, 2008

Lectures: CTW 312

Course Director Doris J. Baker, Ph.D., HCLD(ABB), MT(ASCP), CLS(NCA)

Instructors: Elpedio Pena, M.D., Oliver Oakley, Ph.D., Julie Ribes, M.D., Ph.D.,

OFFICE: 123G CTW Bldg. 900 S. Limestone
(859) 323-1100 ext. 80854

OFFICE HOURS: Immediately after class or by appointment

Course Description:
3 credit hours; Lecture/lab 3:0
An introduction to clinically relevant molecular techniques including electrophoresis, northern, Southern and western blotting, ELISA, and PCR; Advanced immunohematology focuses on transfusion therapy, apheresis and component therapy, hemolytic diseases, histocompatibility testing, and addresses federal regulation of blood banking.

Course Objectives:
At the end of the course the student should be able to complete the list of following specific objectives:

1. Evaluate different molecular techniques given a specific analyte.
2. Differentiate standard and real time PCR and give examples utilizing each technique.
3. Justify the function of flow cytometry in today’s clinical laboratory.
4. Examine the regulatory agencies in the blood bank and their purpose.
5. Rank, according to severity, the different types of transfusion reactions, and correlate them with the appropriate laboratory results.
6. Compare the autoimmune hemolytic anemias and correctly interpret antibody panels of affected individuals.
7. Evaluate the contribution of immunohematology to the diagnosis of hemolytic disease of the newborn and how it contributes to the treatment of the disease.

Required Text:
Grading:
Exam I 30.0%
Exam II 30.0%
Exam III 30.0%
Assignments 10.0%

Grading Scale:
A 90-100%
B 80-89%
C 70-79%
D 60-69%
F below 60%

Course Policies:
1. Class attendance is expected for all sessions. Please notify the professor directly if you find it necessary to miss a session.
2. Please see the professor during the first two days of class if you have any conflicts in scheduling due to religious observances.
3. With the exception of a documented emergency, there will be no make-up tests for students who are absent or late for an exam.
4. Assignments are due the next period. Points will be deducted for late work at the rate of 1 point per day.

University Policies:

Excused absences: Acceptable reasons for excused absences are listed in Student’s rights and Responsibilities, Section 5.2.4.2. Briefly, these include serious illness, illness or death of someone in the student’s immediate family, University sponsored trips, major religious holidays, and other circumstances the instructor finds reasonable. NOTE: If you intend to be absent to observe a major religious holiday, you must notify Dr. Baker in writing one week in advance of the holiday.

When there is an excused absence, you will be given the opportunity to make up missed work and/or exams. It is the student’s responsibility to inform the instructor of the absence, preferably in advance, but no later than one week after the absence.

Senate Rule 5.2.4.2 states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness or death in the immediate family. The University Health Services (UHS) will no longer give excuses for absences from class due to illness or injury. UHS forms can be date stamped to show that students went to the trouble of going to University Health Service, but it does not mean that students actually saw a physician or a nurse. If the faculty member wants further verification that a student kept an appointment with University Health Services (especially when there have been multiple or prolonged absences
from class), the student will need to sign a release of information form (available from UHS) that will give permission for the staff to talk with the faculty member.

Severe Weather: UK Policy/Information:

It is the policy of the University of Kentucky to keep all offices open and classes meeting as scheduled except under extraordinary conditions.

If severe weather should result in changes to the university schedule, the university will follow specific procedures about when those decisions are made and how they will be announced. Details of those procedures are available at http://www.uky.edu/PR/News/severe_weather.htm.

All faculty, staff and students should note that announcements regarding the cancellation of classes and closure of offices, or a delayed opening will normally be made by 6 a.m. through the local news media. The most up-to-date and complete information will be available from the UK Infoline at 257-5684, UK TV Cable Channel 16, or the UK Web site at http://www.uky.edu/

Cheating and plagiarism: Descriptions of what constitutes cheating and plagiarism are found in Student Rights and Responsibilities, Sections 6.3.1 and 6.3.2. Be aware that the minimum consequence for either offense is an “E” in the course. Suspension and dismissal from the University are also options.

Classroom and Learning Accommodations: Instructors will make reasonable accommodations for physical and/or learning disabilities that could inhibit student academic success. The Disability Resource Center certifies the need for and specifies the particular type of such accommodations on a student-by-student basis. Students seeking accommodations must submit this certification to the faculty. Contact the Center staff at 257-2754.

Writing Skills: Helping promote scholarship is more than simply teaching the subject matter -- all students need to improve and refine their skills in verbal and written expression. Regardless of discipline, Faculty has the right -and the obligation- to expect students to use English properly in all aspects of the course (S.R.5.2.4.3). Instructors may ask students to rewrite papers, make writing style one of the grading criteria, and report a seriously deficient student to his/her college for remedial work.
## CLS 848, Advanced Immunohematology - Calendar

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<th>Lecturer</th>
<th>Assignments - TBA</th>
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<td>• Flow Cytometry</td>
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<td>• Discussion*</td>
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<td>• Transfusion Safety &amp; Federal Regulations</td>
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<td>• Discussion Session</td>
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<td>• Transfusion Therapy</td>
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<td>• Apheresis</td>
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<td>• Discussion</td>
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<td>• Adverse Effects of Blood Transfusion</td>
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<td>• Transfusion Transmitted Viruses</td>
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<td>• Hemolytic Disease of the Newborn</td>
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<td>• LIS in Blood Banking</td>
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<td>• Discussion Group</td>
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<td>• Polyagglutination</td>
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<td>• Discussion Session</td>
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<td>• Medicolegal &amp; Ethical Aspects of</td>
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<td>Session and Student presentations</td>
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<td>Final Exam</td>
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* Dr. Baker will attend discussion sessions, which will be led by Ms. Law. Discussion sessions will cover previous week’s lecture. The first discussion will be a review of CLS 838.