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OFFICE OF THE SENATE COUNCIL

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

1. Submitted by College of Health Sciences Date 8/1/2007

   Department/Division offering course Clinical and Reproductive Sciences

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OFFICE OF THE SENATE COUNCIL

2. Changes proposed:
   (a) Present prefix & number CSC 528 Proposed prefix & number CSC 528

   (b) Present Title Laboratory Techniques for Non-CLS Students

   New Title Laboratory Techniques for Clinical Sciences Students

   (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: Lab Techniques for CS Students

   N/A

   (d) Present credits: 2 Proposed credits: 2

   (e) Current lecture: laboratory ratio 0/2 Proposed: 1/2

   (f) Effective Date of Change: (Semester & Year) Summer, 2008

3. To be Cross-listed as: N/A
   Prefix and Number

   Signature: Department Chair

4. Proposed change in Bulletin description:
   (a) Present description (including prerequisite(s):
   Basic clinical laboratory principles and techniques; includes laboratory safety, sterilization procedures, pipetting, microscopy, routine culture and staining procedures, chamber counts, laboratory math calculations and statistics, quality control, quality assurance, chain of custody and laboratory reporting. Consent of instructor required for non-CS students.

   (b) New description: Basic clinical laboratory principles and techniques; includes laboratory safety, sterilization procedures, pipetting, microscopy, routine culture and staining procedures, chamber counts, laboratory math calculations and statistics, Consent of instructor required for non-CS or non-CLS students

   (c) Prerequisite(s) for course as changed:

5. What has prompted this proposal? Both Clinical Laboratory Science undergraduate students and Clinical Sciences graduate students need to take this course. The title implies that non-CLS students should not be admitted to the course. Also the topics quality control, quality assurance, chain of custody and laboratory reporting have been moved from this course to CLS 836 (Management) for CLS undergraduate students and to CSC 625 for CS Graduate students so that these objectives relate better to student's curriculum (either CLS or Reproductive Lab Science). An evaluation of the course documented that there should be an official lecture component (versus introduction to procedures) in the course, changing the lecture to laboratory ratio from 0:2 to 1:2.

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

   The topics quality control, quality assurance, chain of custody and laboratory reporting have been moved from this course to CLS 836 (Management) for CLS undergraduate students and to CSC 625 for CS Graduate students so that these objectives relate better to student's curriculum (either CLS or Reproductive Lab Science). Therefore the objectives have been deleted from CSC 528.

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? X 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.)

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10. Is this course currently included in the University Studies Program? ☐ Yes X No

If yes, please attach correspondence indicating concurrence of the University Studies Committee.

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.** X☐ **Check here if 400G-500.**

12. Is this a minor change? ☐ Yes X 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: 323-1100 X80854

Signatures of Approval:

July 29, 2007 Date of Approval by Department Faculty	Reported by Department Chair
11/07/07 Date of Approval by College Faculty	Reported by College Dean
2/12/2008 *Date of Approval by Undergraduate Council	Reported by Undergraduate Council Chair
12/18/07 *Date of Approval by Graduate Council	Reported by Graduate Council Chair
12/18/07 *Date of Approval by Health Care Colleges Council (HCCC)	Reported by HCCC Chair
*Date of Approval by Senate Council	Reported by Senate Council Office
*Date of Approval by University Senate	Reported by Senate Council Office

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

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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]

CSC 528 LABORATORY TECHNIQUES
FALL 2007

PROFESSOR:	Doris J. Baker, Ph.D., HCLD(ABB), MT(ASCP), CLS(NCA)
OFFICE:	126E CTW Building, 900 S. Limestone St.
PHONE NUMBER:	(859) 323-1100 ext. 80854
OFFICE HOURS:	By appointment
LAB INSTRUCTOR:	**Kim Campbell M.S., MT(ASCP), CLS(NCA)**
OFFICE:	126D CTW Building, 900 S. Limestone St.
PHONE NUMBER:	(859) 323-1100 ext. 80853

Course Description:

Lecture: students will be introduced to basic clinical laboratory principles and techniques. The course covers: 1) laboratory safety; 2) pipetting methods; 3) microscopy for light, phase, stereo and inverted microscopes; 4) chamber counts; 5) sterilization rationale and procedures; 6) routine cultures and staining procedures; 7) basic white blood cell identification; 8) basic urinalysis testing; and 9) laboratory math calculations and statistics. **Laboratory:** During the laboratory component of the course will: calibrate and correctly use standard pipettes; perform light, phase, stereo and inverted microscopy, including scope calibration; perform chamber counts using the Neubauer hemacytomter, Makler chamber, and Cell-Vu; perform routine sterilization procedures; prepare media and perform routine culture techniques; perform staining including Gram's, Wright's and Papainacolaou stains; identify white blood cells; perform macroscopic and microscopic urinalyses; perform a basic chemistry procedure; and perform laboratory math calculations including basic laboratory statistics and chamber count data. **Consent of instructor required for non -CSC students.**

General Course Objectives CSC 528:
Lecture Component
By the end of the course the student will be able to:

1. Understand all clinical laboratory safety rules and regulations required by CLIA, OSHA, FDA and EPA.

2. Describe the various pipettes and correct usage for each.

3. Describe the principles for light, phase, stereo and inverted microscopy; discuss the potentials uses for each type of microscope.

4. Compare and contrast the counting chambers routinely used in the laboratory, to include usage, chamber properties (e.g. depth), calculations and limitations.

5. Describe the proper sterilization procedure for media, instruments and glassware.

6. List the step for routine culture methods including media selection, proper isolation, incubation conditions, and interpretation of results as related to reproductive microbiology.

7. Describe the principle and application for each staining technique covered.

8. List and describe the morphological characteristics of the five principle types of leukocytes that normally circulate in the peripheral blood.

9. Explain the principles used in chemical testing of the urine.

10. Interpret normal and abnormal findings in the macroscopic and microscopic urinalysis.

11. Understand basic clinical laboratory math principles and statistical calculations.

General Course Objectives for CSC 528:
Laboratory Component
By the end of the course the student will be able to:

1. Observe all safety rules while working in the student and clinical laboratory.

2. Use aseptic technique when performing laboratory procedures.

3. Choose the correct pipette for the intended purpose.

4. Pipette accurately and efficiently, selecting the appropriate pipette for each task.

5. Appropriate use of light, phase, stereo and inverted microscopy.

6. Calibrate the light microscope.

7. Make accurate dilutions and perform calculations for selected laboratory tasks.

8. Accurately perform counts using the Neubauer hemacytometer, Makler chamber and Cell-Vu (as appropriate).

9. Perform routine disinfect ion and sterilization procedures.

10. Select appropriate media and culture conditions for specimens.

11. Successfully perform colony isolation using plate streaking techniques.

12. Successfully perform semi-quantitative colony counts from cultured specimen.

13. Make Gram stains according to the required standards and accurately interpret the results.

14. Perform Wright's stain and Papainacolaou stains (graduate students) according to the required standards and accurately interpret the results.

15. Recognize and identity the five principle types of leukocytes that normally circulate in the peripheral blood.

16. Perform a macroscopic and microscopic urinalysis, including clinitest, ictotest and SSA.

17. Perform a basic chemistry procedure, applying Beer's Law.

18. Accurately perform basic laboratory math calculations.

22. Generate written reports, including tables, use word processor software.

Required Text:
Doucette, Lorraine J., Mathematics for the Clinical Laboratory. Philalelphia, W.B. Saunders Co., 1997.

Reference Texts:
Bishop, Michael L., Duben-Engelkirk, Janet L., Fody, Edward P., Clinical Chemistry Principles, Procedures, Correlations. 4th Ed. Philadelphia, Lippincott Williams and Wilkins, 2000.

Brunzel, Nancy A., Fundamentals of Urine and Body Fluid Analysis. Philalephia, W.B. Saunders Co., 1994.

Doucette, Lorraine J., Mathematics for the Clinical Laboratory. Philadelphia, W.B. Saunders Co., 1997.

Elder, Kay, Baker, Doris J., Ribes, Julie A., Infections, Infertility and Assisted Reproduction. Cambridge, UK, Cambridge University Press, 2005.

Forbes, Betty, A., Sahm, Daniel, F., Weissfeld, Alice, S., Bailey & Scott's Diagnostic Microbiology. 11th edition. St. Louis, C.V. Mosby Publishers, 2002.

Henry, John Bernard, Clinical Diagnosis and Management by Laboratory Methods. 19th Ed. W.B.Saunders Company, Philadelphia, 1996.

McKenzie, Shirlyn B., Clinical Laboratory Hematology, Prentice Hall, Upper Saddle River, NJ, 2004.

Mortimer, David, Practical Laboratory Andrology. Cambridge, Oxford University Press, 1994.

Baker, Doris J. and Witmyer, Jeannine, Semen Analysis Training Tool 2000. Lexington, Kentucky, Reproductive Educational Resources, Ltd., 2000.

Stiene-Martin, Anne, Lotspetch-Steininger, Cheryl, Koepke, John, "Clinical Hematology; Principles, Procedures and Correlations". 2nd edition. Philadelphia, Lippincott, 1998.

Strasinger, Susan K., Di Lorenzo, Marjorie S., Urinalysis and Body Fluids. 4th. Ed. Philadelphia, F.A Davis Co., 2001.

"WHO Laboratory manual for the examination of semen and sperm-cervical mucus interaction. 4th edition. Cambridge, Cambridge University Press, 1999.

Grading: CSC 528

Quizzes (2)	70%
Lab Reports	5%
Assignments	25%

Grading Scale for undergraduate students:
90-100% = A
80-89% = B
70-79% = C
60-69% = D
below 60% = E

Grading scale for graduate students:
93-100% = A
85-92% = B
77-84% = C
below 77% = E

Note: Graduate students must also complete:

Assignments:

- Statistics for Clinical Sciences
- Laboratory Organization and Management
- Write a procedure according to NCCLS Guidelines

Perform additional laboratory exercises to include:

- Sperm counts using Neubauer, Makler and/or Cell-Vu chambers
- Papainacolaou stains

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 weeks 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. Homework assignments should reflect individual work, and are due the following class period. Late homework will not be accepted.

5. Proper laboratory attire is required at all times. Laboratory safety rules must be followed at all times. Any student, not properly attired, will be asked to leave the laboratory session. Any student, not following laboratory safety protocol, will be asked to leave the laboratory session.

NOTE: Policies related to excused absences, cheating/plagiarism, withdrawal, incompletes and examinations can be found in your copy of the Student Rights and Responsibilities of The University of Kentucky. http://www.uky.edu/studentaffairs/code.

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.uly.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/.

CLS 528 is taught in a modular format with classes meeting 4 hours/daily for a two-week period for a total of 40 laboratory hours. Lecture is 1.5 hours/day and laboratory meets for 2.5 hours/day.

LECTURE – Room CTW 405	LABORATORY – Room CTW 421 and CTW 425
Safety Pipetting	Completion of Safety Requirements Pipetting Techniques Calibration of Pipets
Care and Use of the Microscope Hemocytometry	Care and Use of the Microscope Calibration of the Microscope Calibration of the Ocular Micrometer
    Sterilization Techniques Clinical Microbiology	Hemocytometry:chamber counts and calculations using: Neubauer Hemocytometyer and/or Makler chamber Run autoclave Media Selection,Colony Isolation and Gram Stains
Clinical Microbiology (con't) Staining	Interpret culture results; Manual and Automated Staining
Quiz #1 Lab Math	Total protein; QA/QC
Urinalysis Testing (Physical and Chemical)	Physical and Chemical Examination of the Urine
Urinalysis Testing (Microscopic)	Microscopic Examination of the Urine
Normal Leukocyte Morphology	Normal Leukocyte Morphology
Review	Continuation
Quiz #2	Laboratory Quiz

Gill, Sharon

From: Lindsay, Jim D.
Sent: Wednesday, December 19, 2007 11:23 AM
To: Gill, Sharon
Cc: Baker, Doris; Stewart, Sharon R; Brothers, Sheila C; Anderson, Heidi Milia
Subject: HCCC Transmittal- CSC 528 Course Change

December 19th, 2007

TRANSMITTAL

TO: Sharon Gill
Undergraduate Council

FROM: Jim Lindsay
Health Care Colleges Council

On December 18th, 2007 via consent agenda the Health Care Colleges Council approved the following proposal and is now forwarding it to the Undergraduate Council to approve:

College of Health Sciences

1. Course Change CSC 528 "Laboratory Techniques for Clinical Sciences Students"

Attached are the materials to implement the requested action.

cc: Doris Baker
Sharon Stewart
Shelia Brothers
Heidi Anderson

Jim Lindsay
Health Care Colleges Council Coordinator
Associate Provost for Faculty Affairs Office
University of Kentucky, 205 Frazee Hall
Lexington, KY 40506-0031 Ph. (859) 323.6638
www.uky.edu/Provost/AcademicCouncil/council.php

November 6, 2007

MEMORANDUM

TO: Dr. Heidi Anderson, Health Care Colleges Council Chair &
Associate Provost for Academic Affairs

FR: Sharon R. Stewart, CHS Associate Dean for Academic Affairs

RE: Course Change Requests for the Division of Clinical and Reproductive Sciences, Department of Clinical Sciences, College of Health Sciences

Attached please find course change requests and abbreviated syllabi for the following courses: CLS 838; CLS 848; CSC 528; and CSC 624. As stated on the course change request forms, these course changes are requested to reflect the curricular requirements of the Clinical Laboratory Sciences accreditation agency, NAACLS, to incorporate clinical advances in the field, and to complete better describe the content of existing courses.

It is the College's recommendation that these course change requests be approved. These requests have been recommended for approval by the Department Chair and by the Academic Affairs Committee, a faculty body representing the College of Health Sciences.

For additional information, please contact Dr. Doris Baker, 323-1100, ext 80854.