

COURSE APPROVAL/CHANGE DOCUMENT

(See back of form for instructions)

Submit

1. ADDITION REVISION TERMINATION

2. IF REVISION: denote changes (i.e. Title only; Title, CIP and Description; etc.):

Title, course schedule type, lecture and lab hours

3. COURSE NUMBER FS 550

4. COURSE TITLE Forensic Microscopy

5. IF REVISION: Previous Course No. FS550

Previous Title Crime Laboratory I: Microscopy

6. FOR ADDITIONS AND REVISIONS -
FIRST TERM/YEAR TO BE OFFERED:

Fall Spring Summer Term 2020

7. FOR TERMINATIONS ONLY -
LAST TERM/YEAR TO BE OFFERED:

Fall Spring Summer Term _____

8. COLLEGE: Coll of Sci, Tech, Engr & Math

9. DEPARTMENT NAME: Chemistry & Physics

10. CIP CODE (Classification of Instructional Program / US Bureau of Labor Statistics): 40.0501

11. FIXED CREDIT HOURS: YES NO

2.0 Total Credit Hours

1.0 Lec Contact Hours

2.0 Lab Contact Hours

___ Other Contact Hours

12. VARIABLE CREDIT HOURS: YES NO

___ Min Total Credit Hours ___ Max Total Credit Hours

___ Min Lec Contact Hours ___ Max Lec Contact Hours

___ Min Lab Contact Hours ___ Max Lab Contact Hours

___ Min Other Contact Hours ___ Max Other Contact Hours

13. CAN THIS COURSE BE TAKEN FOR ADDITIONAL CREDIT: YES NO If YES, total number of times course can be taken _____

14. MAXIMUM ENROLLMENT ALLOWED FOR COURSE: 12 Justification of maximum enrollment:

The enrollment is limited by the size of the forensic lab facility, as well as the availability of instruments (microscopes) and equipment needed to run the lab.

15. CLASS SCHEDULE TYPE/ FACULTY WORKLOAD: Choose appropriate schedule type: LB - Lecture/Lab

Faculty Workload: 2.5 Class schedule type justification:

The course involves a 1 hour lecture and a 2 hour lab. The workload for lecture is 1 and that for lab is 1.5. The lab is an actual hands-on lab for students, not an activity. The faculty member is in charge of prepping the lab each week.

16. COURSE LEVEL: Mixed Undergrad/Graduate

17. GRADE TYPE: Standard Grade

18. DEVELOPMENTAL COURSE: YES NO

19. CROSS-LISTED COURSE:

YES WITH _____ NO

20. SPECIAL COURSE FEE? (Must be Board approved)

YES Amount \$ _____ NO

21. Required faculty qualifications to teach this course:

Faculty should have a minimum of a masters degree in chemistry, biology, or forensic science with experience in forensic science, forensic technology, forensic chemistry, especially as it pertains to forensic microscopy.

22. UNIVERSITY STUDIES COURSE: YES NO

If yes, please select one general education category:

If yes, please select up to three general education learning goals that reflect the priorities for student learning in the course. Please rank these in priority order, i.e. 1,2,3 by inserting the numbers/rankings into the boxes:

- ___ General Education Learning Goal 1: Ethical Reasoning
- ___ General Education Learning Goal 2: Global Learning
- ___ General Education Learning Goal 3: Information Literacy
- ___ General Education Learning Goal 4: Written Communication
- ___ General Education Learning Goal 5: Oral Communication
- ___ General Education Learning Goal 6: Critical Thinking
- ___ General Education Learning Goal 7: Quantitative Literacy

If the proposed new or revised course is a General Education/University Studies course, please provide a short rationale why this course should be considered as a general education course.

Attach the following:

- a) Class syllabus using the syllabus template. [Syllabus Template Link](#)
- b) Memo from Library Dean assessing available and needed library resources and services.
- c) If applicable, memos from Department Chair(s) in affected department(s) stating support or that issues/conflicts are resolved.

COURSE APPROVAL SIGNATURES

Department Chairperson	Dean of Kent Library	College Council
Philip W. Crawford <small>Digitally signed by Philip W. Crawford Date: 2019.04.05 13:40:02 -05'00'</small>		Brad Deken <small>Digitally signed by Brad Deken Date: 2019.04.16 16:08:45 -05'00'</small>
Educator Preparation Committee	University Studies Council	Graduate Council

To obtain the next signature, save the pdf to your desktop and then email the form as an attachment to the next individual for signing. When submitting the form, the email must come from your Southeast email account.

Registrar's Office Use Only				
SCACRSE_____	Degree Audit_____	Bulletin_____	Degree Map_____	SHATATR_____

FS550
Forensic Microscopy
Fall 2020

- (1) Course Number: FS550
- (2) Course Title: Forensic Microscopy
- (3) Catalog Description: Introduction to the techniques of forensic microscopy in the analysis of physical evidence. 1 hour lecture and 2 hour lab.
- (4) Prerequisites: CH344 or consent of instructor
- (5) Co-requisites:
- (6) Credit Hours: 2.0
- (7) Semester: Fall 2020
- (8) Class Meeting Time(s), location and format: R 5:30-6:20 pm, MG228; 6:30-8:20 pm, MG235
- (9) Instructor: Pam Johnson
- (10) Instructor Contact Information:

Criminalist Supervisor Troop E Lab
Missouri State Highway Patrol
122 S. Ellis Cape Girardeau, MO 63703
Phone 573-290-5130 ext 4508 FAX 573-290-5133
E-mail: pmjohnson@semo.edu; pamela.johnson@mshp.dps.mo.gov
Office Hours: By Appointment

(11) Concerns: Questions, comments or request regarding this course should be taken to the instructor. Unanswered questions or unresolved issues about this class can be directed to Dr. Philip Crawford.

(12) Course Learning Outcomes:

Students will be able to:

1. Describe the basic theory and operations of a stereomicroscope and a compound light microscope and their application to forensic analysis of a variety of physical evidence commonly encountered in forensic analysis.
2. Properly select and handle specimens for observations under the microscope, as well as select and execute proper techniques for forensic analysis.

3. Recognize the scope and limitations of the interpretation of the results of microscopic examination and its implications when used in the criminal justice system.

(13) Course-specific Required Materials: Textbook: Practical Forensic Microscopy: A Laboratory Manual by Barbara P. Wheeler and Lori J. Wilson, Wiley-Blackwell, England, 2008. Other: Lab coat, safety goggles

(14) Course Content:

Lectures will be given on microscopic theory as applies to experiments

Topic	Chapter	Week
Introduction; Stereomicroscope use and applications	Chapter 1: Experiment 1A	August 27
Compound Microscope operation, use -Koehler Illumination and Measurement	Chapter 2: Experiments 2A and 2B	September 3, September 10
Refractive Index -Glass	Chapter 2: Experiment 2D	September 17
Polarized Light Microscope	Chapter 3: Experiment 3A	September 24
Physical Match Examinations	Chapter 6: Experiment 6	October 1
Midterm Exam		October 8
Botanical Examinations	Chapter 13: Experiment 13	October 15
Hair Examinations	Chapter 15: Experiments 15A, 15B, and 15C	October 22, October 29,
Glass Examinations	Chapter 16: Experiment 16 and 16A	November 5, November 12
Fiber Examinations	Chapter 17: Experiments 17A and 17C	November 19, December 3
Thanksgiving Break	No class	November 26
Soil Examinations	Chapter 18: Experiment 18	December 10
Final Exam		December 17

(15) Grading Scale and Policies:

Experiments will consist of knowns for comparison and unknowns to be identified.
 Lab reports should be submitted no later than 2 weeks after they are assigned.
 Lab reports should include the following:

Introduction or Purpose Statement

Theory Section: Describes the principles that allow the microscope to be a viable tool in this

experiment.

Procedure: A description of the method or steps used to conduct the experiment.

Data and/or Observations: Record of data collected during the experiment in a form that will support your results or conclusions.

Results/Conclusions: Statements concerning the result or conclusion reached at the end of the experiment.

Paper:

Choose a topic about the use of a microscopic technique and its application in the field of Forensics from the Chapters we are not using in class. Write a 3-5 page paper with additional references. Graduate students will be required to write a second topic paper.

Tests:

Midterm will cover Microscopic topics covered from lecture and the first 2 or 3 experiments. The Final will be Comprehensive.

Assignment	Points	
	Graduate Students	Undergraduates
Topic Paper 1	50	50
Lab Reports	240	240
Midterm Exam	100	100
Final Exam	100	100
Topic Paper 2	50	NA
Total	540	490

Grading Scale

Graduate Students	Undergraduates
A 90-100	A 90-100
B 80-89	B 80-89
C 70-79	C 70-79
F < 70	D 60-69
	F < 60

(16) Final Exam Schedule:

Final Exam: December 17, 2020, 6 pm, MG228

(17) **Academic Honesty** – Southeast Missouri State University expects all students, faculty and staff to operate in an honest and ethical manner. Academic dishonesty is a very serious offense because it undermines the value of your education and the education of others. Students who engage in academic dishonesty face significant penalties. Forms of academic dishonesty include, but are not limited to, plagiarism, cheating, contract cheating, misrepresentation, and other actions you take. Some of these are defined below:

- Plagiarism means passing off someone else's work as your own, whether it is intentional or unintentional.
- Cheating includes copying from another person or source of information to meet the requirements of a task.
- Contract cheating is paying someone else or a company to do your work.
- Misrepresentation means you are posing as someone else or someone else is posing as you to complete a task.
- Collusion means working with one or more people to cheat. If you help someone cheat or plagiarize you will face the same penalties.

For more information, visit the Responsible Redhawks Code of Conduct

<http://www.semo.edu/responsibleredhawks/code-of-conduct.html> or the Faculty Handbook Section (D) on Academic Honesty <http://www.semo.edu/facultysenate/handbook/5d.html>

(18) **Accessibility** – Southeast Missouri State University and Disability Services are committed to making every reasonable educational accommodation for students who identify as people with disabilities. Many services and accommodations which aid a student's educational experience are available for students with various disabilities. Students are responsible for contacting Disability Services to register and access accommodations. Accommodations are implemented on a case by case basis. For more information, visit <http://www.semo.edu/ds/> or contact Disability Services at 573-651-5927.

(19) **Civility** – Your university experience is purposely designed to introduce you to new ideas, help you think effectively, develop good communication skills, evaluate information successfully, distinguish among values and make sound judgements. Doing this well requires respectful and courteous discussion among and between students and the instructor. Together, we must create a space where we acknowledge and respect others have different experiences, perspectives and points of view. Disagreements are likely. Mutual respect for one another and a willingness to listen are important. Remember, you are responsible for your behavior and actions. There is a no tolerance policy on bullying or harassment of any kind. Additional information on student conduct may be found at: <http://www.semo.edu/pdf/stuconduct-code-conduct.pdf?ver=1.0> and http://www.semo.edu/pdf/Conduct_Faculty_Resource_Guide.pdf

(20) **Mandatory Reporting** – I will keep information you share with me confidential to the best of my ability, but as a professor I am legally required to share information about sexual misconduct and crimes I learn about to make our campus and community safe for everyone.

(21) **Student Success** – This course uses SupportNET, Southeast's student success network, to improve communication between students, faculty and staff on campus. You'll get emails through SupportNET with information about resources or concerns. Please read these emails—

they are sent to help you succeed! You can access SupportNET through your portal, Moodle or directly at supportnet.semo.edu to see any academic alerts, ask for help and to access resources to support your success at Southeast.

*Definition of 'blended' to be added.