

New Course Request

Indiana University

Indianapolis Campus

Check Appropriate Boxes: Undergraduate credit Graduate credit Professional credit

1. School/Division Science / Forensic Science 2. Academic Subject Code FIS

3. Course Number 406 (must be cleared with University Enrollment Services) 4. Instructor Ammerman

5. Course Title Forensic Microscopy

Recommended Abbreviation (Optional) _____
(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): fall / 2009

7. Credit Hours: Fixed at 3 or Variable from _____ to _____

8. Is this course to be graded S-F (only)? Yes _____ No X

9. Is variable title approval being requested? Yes _____ No X

10. Course description (not to exceed 50 words) for Bulletin publication: P: FIS 206. Open only to majors in the FIS program or with consent of the instructor. Fall. Techniques in the analysis of forensic microscopic evidence. Topics include property of light, compound microscopy, micrometry, refraction, dispersion, stereomicroscopy, sample preparation, polarizing light microscopy, and instrumental microscopy.

11. Lecture Contact Hours: Fixed at 1 or Variable from _____ to _____

12. Non-Lecture Contact Hours: Fixed at 2 or Variable from _____ to _____

13. Estimated enrollment: 20 of which 0 percent are expected to be graduate students.

14. Frequency of scheduling: every fall Will this course be required for majors? yes

15. Justification for new course: This course will be required of majors.

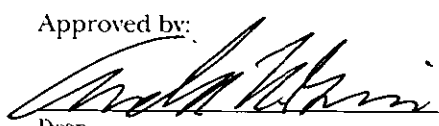
16. Are the necessary reading materials currently available in the appropriate library? yes

17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by:  Date 12/2/08
Department Chairman/Division Director

Approved by:  Date 12/10/08
Dean

Date _____
Dean of Graduate School (when required)

Date _____
Chancellor/Vice-President

Date _____
University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF AN UNDERGRADUATE COURSE
(10000-40000 LEVEL)

DEPARTMENT Chemistry and Chemical Biology

EFFECTIVE SESSION Fall 2009

INSTRUCTIONS: Please check the items below which describe the purpose of this request.

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1. New course with supporting documents | <input type="checkbox"/> 7. Change in course attributes (department head signature only) |
| <input type="checkbox"/> 2. Add existing course offered at another campus | <input type="checkbox"/> 8. Change in instructional hours |
| <input type="checkbox"/> 3. Expiration of a course | <input type="checkbox"/> 9. Change in course description |
| <input type="checkbox"/> 4. Change in course number | <input type="checkbox"/> 10. Change in course requisites |
| <input type="checkbox"/> 5. Change in course title | <input type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED:

EXISTING:

TERMS OFFERED
Check All That Apply:

Subject Abbreviation FIS Subject Abbreviation _____
Course Number 406 Course Number _____
Long Title Forensic Microscopy
Short Title _____

Summer Fall Spring

CAMPUS(ES) INVOLVED

Calumet N. Central
 Cont Ed Tech Statewide
 Ft. Wayne W. Lafayette
 Indianapolis

Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

CREDIT TYPE

1. Fixed Credit: Cr. Hrs. 3
2. Variable Credit Range:
Minimum Cr. Hrs. _____
(Check One) To Or
Maximum Cr. Hrs. _____
3. Equivalent Credit: Yes No

COURSE ATTRIBUTES: Check All That Apply

1. Pass/Not Pass Only 6. Registration Approval Type
2. Satisfactory/Unsatisfactory Only Department Instructor
3. Repeatable 7. Variable Title
Maximum Repeatable Credit: _____ 8. Honors
4. Credit by Examination 9. Full Time Privilege
5. Special Fees 10. Off Campus Experience

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture	57	1	16	34
Recitation				
Presentation				
Laboratory	113	1	16	66
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Observ				

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):

P: FIS 406. Open only to majors in the FIS program or with consent of the instructor. Fall. Techniques in the analysis of forensic microscopic evidence. Topics include property of light, compound microscopy, micrometry, refraction, dispersion, stereomicroscopy, sample preparation, polarizing light microscopy, and instrumental microscopy.

Calumet Department Head _____ Date _____	Calumet School Dean _____ Date _____
Fort Wayne Department Head _____ Date _____	Fort Wayne School Dean _____ Date _____
Indianapolis Department Head _____ Date <u>12/2/08</u>	Indianapolis School Dean <u>[Signature]</u> Date <u>12/12/08</u>
North Central Department Head _____ Date _____	North Central Chancellor _____ Date _____
West Lafayette Department Head _____ Date _____	West Lafayette College/School Dean _____ Date _____
	West Lafayette Registrar _____ Date _____

Forensic Microscopy

FIS 406

Course Syllabus

Fall 2009

Mrs. Gina Ammerman
Lecturer-Forensic and Investigative Sciences Program
gammerma@iupui.edu
Office: LD 326
Phone: 274-6820
Office Hours: by appointment

Class times and location: Tuesday 9:00-11:50am, Room SL 309.

Prerequisites: FIS 206. Open only to FIS majors

Textbook (REQUIRED): Essentials of Polarizing Light Microscopy, by John Gustav Delly.
You will also need safety glasses.

Attendance: Mandatory.

Course Description

Learn techniques in the analysis of forensic microscopic evidence. Topics include property of light, compound microscopy, micrometry, refraction, dispersion, stereomicroscopy, sample preparation, polarizing light microscopy, and instrumental microscopy.

Course Content and Organization

This course will cover the major techniques used in the analysis trace evidence commonly encountered at crime scenes. The techniques of stereo and compound light microscopy and polarizing light microscopy will be studied and used extensively. Instrumental microscopy techniques such as infrared microscopy, UV-Vis microspectrophotometry, and Raman microscopy will be discussed. There will lecture and lab components for each of topics covered in the course.

Course objectives: At the end of this course, students should be able to...

1. Apply stereomicroscopy to the analysis of trace evidence
2. Apply compound microscopy to the analysis of trace evidence
3. Apply polarized light microscopy to the analysis of trace evidence
4. Apply infrared microscopy to the analysis of trace evidence
5. Apply UV-visible microspectrophotometry to the analysis of trace evidence
6. Analyze basic types of trace evidence

Academic Misconduct

(Taken from Academic Handbook, 2001 and the Code of Student Rights, Responsibilities, and Conduct)

http://www.indiana.edu/~deanfac/acadhbkc/acad_handbk_2001.pdf

<http://www.life.iupui.edu/Who/Dean/Code>

The Academic Handbook states that faculty members have the responsibility of fostering the "intellectual honesty as well as the intellectual development of students....The faculty member should explain clearly the meaning of cheating and plagiarism as they apply to the course....Should the faculty member detect signs of plagiarism or cheating, it is his or her most serious obligation to investigate these thoroughly, to take appropriate action with respect to the grades of students, and in any event to report the matter to the Dean of Students. The necessity to report every case of cheating, whether or not further action is desirable, arises particularly because of the possibility that this is not the student's first offense, or that other offenses may follow it. Equity also demands that a uniform reporting practice be enforced; otherwise, some students will be penalized while others guilty of the same actions will go free." (p. 172).

Academic Misconduct: (from the Code of Student Rights, Responsibilities, and Conduct)

1. Cheating: A student must not use or attempt to use unauthorized assistance, materials, information, or study aids in any academic exercise, including, but not limited to, the following:

a. A student must not use external assistance on any "in-class" or "take-home" examination, unless the instructor specifically has authorized external assistance. This prohibition includes, but is not limited to, the use of tutors, books, notes, and calculators.

b. A student must not use another person as a substitute in the taking of an examination or quiz.

c. A student must not steal examinations or other course materials.

d. A student must not allow others to conduct research or to prepare work for him or her without advance authorization from the instructor to whom the work is being submitted. Under this prohibition, a student must not make any unauthorized use of materials obtained from commercial term paper companies or from files of papers prepared by other persons.

e. A student must not collaborate with other persons on a particular project and submit a copy of a written report which is represented explicitly or implicitly as the student's individual work.

f. A student must not use any unauthorized assistance in a laboratory, at a computer terminal, or on field work.

g. A student must not submit substantial portions of the same academic work for credit or honors more than once without permission of the instructor to whom the work is being submitted.

h. A student must not alter a grade or score in any way.

2. Fabrication: A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citations to the sources of information.

3. Plagiarism: A student must not adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. A student must give credit to the originality of others and acknowledge indebtedness whenever he or she does any of the following:

a. Quotes another person's actual words, either oral or written;

b. Paraphrases another person's words, either oral or written;

c. Uses another person's idea, opinion, or theory; or

d. Borrows facts, statistics, or other illustrative material, unless the information is common knowledge.

4. Interference

a. A student must not steal, change, destroy, or impede another student's work. Impeding another student's work includes, but is not limited to, the theft, defacement, or mutilation of resources so as to deprive others of the information they contain.

b. A student must not give or offer a bribe, promise favors, or make threats with the intention of affecting a grade or the evaluation of academic performance.

Faculty Action

If a faculty member has information that one of his/her students committed an act of academic misconduct, the faculty member is required to hold an informal conference with the student. The conference should be prompt and private. If the faculty member concludes that the student is responsible for the misconduct, then the faculty member is authorized to impose an appropriate academic sanction (i.e., lower or failing grade on the assignment, assessing a lower or failing grade for the course).

After reporting the information to the Dean of Students, he/she will review the information to determine if additional sanctions should be applied.

Sanctions are outlined in the Code of Student Rights, Responsibilities, and Conduct. This document appears on the web at the following address: <http://www.life.iupui.edu/Who/Dean/Code/>

Policy on Student Academic Misconduct

Faculty are required to report all incidents of academic misconduct to the Dean of Students. For information about policies and procedures, including due process requirements, see the Code of Student Rights, Responsibilities, and Conduct, especially part III: Student Misconduct and Part IV: Student Disciplinary Procedures. The code is accessible on the internet at <http://www.life.iupui.edu/Who/Dean/Code>

If you need any special accommodations due to a disability, please contact Adaptive Educational Services at (317)-274-3241. The office is located in CA 001E

Grading

	Points
9 Pre-lab exercises at 5 points	45
9 Lab Reports at 40 points	360
9 Lab Notebook pages at 5 points	45
5 Unknown Results at 10 points	50
Final Lab Exercise	150
Total	650

Pre-lab exercises are due before the start of each lab exercise. Each exercise is worth 5 points and is to be turned at the beginning of the lab period. Late pre-labs will not be accepted. Laboratory reports and notebook pages are worth a total of 45 points and are due one week after completing the lab exercise. These are to be turned in to your course supervisor along with copies of your lab notebook pages for that exercise. The late penalty is 3 points per day late. This includes the total grade on report and notebook pages. Unknown results should also be turned in with your report. Late unknown results will result in 1 point per day late. Weekends do not count towards late penalty. Reports will have a cover sheet to be turned in with report. These include point break down of report and unknown result. These can be found on OnCourse CL.

Grading Scale

Your grade will be based on a strict grading scale as outlined below. There will be no curving of final grades.

A: 100 - 93%	A-: 92.9 - 90%	B+: 89.9 - 87%
B: 86.9 - 83%	B-: 82.9 - 80%	C+: 79.9 - 77%
C: 76.9 - 73%	C-: 72.9 - 70%	D+: 69.9 - 67%
D: 66.9 - 63%	D-: 62.9 - 60%	F: less than 60%

OnCourse

You will need to have access to the internet for this course. OnCourse will be used on a regular basis for upload lab materials such as pre-labs, laboratory exercises, and post-labs, as well as report sheets and cover sheets for the labs. We will also post lecture handouts and power point presentations on OnCourse. If you have questions on using OnCourse please ask. We will also be using the newest version of Windows (2007). Microsoft has a patch available to download for free so that you are able to open documents in 2003 written in 2007. However, UITS has Windows 2007 available to students at no cost to download, which I would recommend.

Schedule of Activities

Start Date	Topic	Textbook
January 13	Lecture 1: Orientation and overview of course, general microscopy	
	Laboratory exercise 1	
January 20	Lecture 2: Property of Light, lens, focus distance	
	Laboratory exercise 2	
January 27	Lecture 3: Kohler Illumination, stage alignment, calibration	
	Laboratory exercise 3	
February 10	Lecture 4: Sample Preparation	
	Laboratory exercise 4	
February 17	No Class – AAFS Meeting in Colorado	
February 24	Lecture 5: Micrometry and Morphology	
	Laboratory exercise 5	
March 10	Lecture 6: Refraction, Becke line, Dispersion	
	Laboratory exercise 6	
March 17	No Class – Spring Break	
March 31	Lecture 7: Polarizing Light Microscopy	
	Laboratory exercise 7	
April 14	Lecture 8: Cross Polars	
	Laboratory exercise 8	
April 28	Lecture 9: Instrumental Microscopy	
	Laboratory exercise 9	
May	Final: Laboratory exercise 10	