New Course Request

1. School/Division: School of Science
2. Academic Subject Code: FIS
3. Course Number: 404 (must be cleared with University Enrollment Services)
4. Instructor: Gina Ammerman
5. Course Title: Forensic Chemistry II
   Recommended Abbreviation (Optional): (Limited to 32 Characters including spaces)
6. First time this course is to be offered (Semester/Year): Spring 2008
7. Credit Hours: Fixed at 4 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, FIS 401, CHEM-C311, and CHEM-C325. Open only to FIS majors. Spring semester. Continuation of FIS 401. Applications of microscopy, chromatography and spectroscopy to the analysis of real and mock evidence, including hairs and fibers, soil and glass, paint, fire residues, drugs, and other chemical evidence.
11. Lecture Contact Hours: Fixed at 2 or Variable from __________ to __________
12. Non-Lecture Contact Hours: Fixed at 6 or Variable from __________ to __________
13. Estimated enrollment: 20 of which 0 percent are expected to be graduate students.
15. Justification for new course: Additional course in Forensic Chemistry Concentration.
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: [Signature] Date 1/19/07
Department Chairman/Division Director

Dean of Graduate School (when required) Date

Approved by: [Signature] Date 2/4/07
Dean

Chancellor/Vice-President Date

University Enrollment Services Date

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

(100-400 LEVEL)

**DEPARTMENT:** Forensic and Investigative Sciences

**EFFECTIVE SESSION:** Spring 2008

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

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

**PROPOSED:**

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th>FIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>404</td>
</tr>
<tr>
<td>Long Title</td>
<td>Forensic Chemistry II</td>
</tr>
</tbody>
</table>

**EXISTING:**

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td></td>
</tr>
<tr>
<td>Long Title</td>
<td></td>
</tr>
</tbody>
</table>

**TERMS OFFERED**

Check All That Apply:

- [ ] Summer
- [ ] Fall
- [ ] Spring

**CAMPUS(ES) INVOLVED**

- [ ] Calumet
- [ ] Cont Ed
- [ ] N Central
- [ ] Tech Statewide
- [ ] Ft Wayne
- [ ] W Lafayette
- [ ] Indianapolis

Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)

**CREDIT TYPE**

| 1. Fixed Credit: Cr. Hrs. | 4 |
| 2. Variable Credit Range: | |
| Minimum Cr. Hrs. (Check One) | |
| Maximum Cr. Hrs. | |

**EQUIVALENT CREDIT:**

- [ ] Yes
- [x] No

**THESIS CREDIT:**

- [ ] Yes
- [x] No

**INSTRUCTIONAL TYPE**

- [ ] Lecture
- [ ] Recitation
- [ ] Presentation
- [ ] Laboratory
- [ ] Lab Prep
- [ ] Studio
- [ ] Distance
- [ ] Clinic
- [ ] Experiential
- [ ] Research
- [ ] Ind. Study
- [ ] Pract/Observer

<table>
<thead>
<tr>
<th>Minutes</th>
<th>Meetings Per Week</th>
<th>Weeks Offered</th>
<th>% of Credit Allocated</th>
<th>Delivery Method (Asyn., Or Syn.)</th>
<th>Delivery Medium (Audio, Internet, Live, Text-Based, Video)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>2</td>
<td>16</td>
<td>50</td>
<td>Syn</td>
<td>Live</td>
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<td>150</td>
<td>2</td>
<td>16</td>
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<td>Syn</td>
<td>Live</td>
</tr>
</tbody>
</table>

**COURSE ATTRIBUTES:**

- [ ] 1. Pass/Not Pass Only
- [ ] 2. Satisfactory/Unsatisfactory Only
- [ ] 3. Repeatable
- [ ] Maximum: Repeatable Credit: |
- [ ] 4. Credit by Examination
- [ ] 5. Designator Required
- [ ] 6. Special Fees
- [ ] 7. Registration Approval Type
- [ ] Department
- [ ] Instructor
- [ ] 8. Variable Title
- [ ] 9. Remedial
- [ ] 10. Honors
- [ ] 11. Full Time Privilege
- [ ] 12. Off Campus Experience

**COURSE DESCRIPTION (INCLUDE REQUISITES):**

P: FIS 206, FIS 401, CHEM C311, CHEM C325. Open only to FIS majors. Spring semester. Continuation of FIS 401. Applications of microscopy, chromatography and spectroscopy to the analysis of real and mock evidence, including hairs and fibers, soil and glass, paint, fire residues, drugs, and other chemical evidence.

**Cross-Listed Courses:**

- [ ]
- [ ]
- [ ]
- [ ]

**Office of the Registrar**

Calumet Department Head: Date

Calumet School Dean: Date

Fort Wayne Department Head: Date

Fort Wayne School Dean: Date

Indy Campus Department Head: Date

Indianapolis School Dean: Date

North Central Department Head: Date

North Central Chancellor: Date

West Lafayette Department Head: Date

West Lafayette College/School Dean: Date

West Lafayette Registrar: Date
FIS 404 – Forensic Chemistry 2

Course Syllabus

Offered every spring

Instructor:
Gina Ammerman
gammerma@iupui.edu
Lecturer-Forensic and Investigative Sciences Program

Office: LD 322

Lab: LD 375  274-6870
     LD 040  278-0403

Course Description
Continuation of FIS 401. Applications of microscopy, chromatography and spectroscopy to the analysis of real and mock evidence including hairs and fibers, soil and glass, paint, fire residues, drugs, and other chemical evidence

Prerequisites: FIS 205, FIS 401, CHEM-C 311, 325. Open only to FIS majors


Meetings:

Course Content and Organization
This course will cover the major techniques used in the analysis of chemical and trace evidence commonly encountered at crime scenes. The techniques of stereo and compound light microscopy, gas, thin layer and liquid chromatography, and UV-visible and infrared spectrophotometry will be studied and used extensively. There will lecture and lab components for each of the types of evidence covered in the course.

Course objectives. At the end of this course, students should be able to:
1. Apply stereomicroscopy to the analysis of chemical and trace evidence
2. Apply compound microscopy to the analysis of chemical and trace evidence
3. Apply polarized light microscopy to the analysis of chemical and trace evidence
4. Apply gas chromatography to the analysis of chemical and trace evidence
5. Apply liquid chromatography to the analysis of chemical and trace evidence
6. Apply thin layer chromatography to the analysis of chemical and trace evidence
7. Apply infrared microscopy to the analysis of chemical and trace evidence
8. Apply UV-visible microspectrophotometry to the analysis of chemical and trace evidence
9. Analyze basic types of illicit drugs
10. Analyze basic types of trace evidence
Academic Misconduct

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

http://www.life.indiana.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 an 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

There will be seven comprehensive laboratory reports during the semester. Each one will count 100 points. In addition, there will be a final exam worth 100 points.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to course</td>
</tr>
<tr>
<td>2</td>
<td>Review of forensic chemistry</td>
</tr>
<tr>
<td>3, 4</td>
<td>The Analysis of hairs and fibers</td>
</tr>
<tr>
<td>5, 6</td>
<td>The analysis of fire residues</td>
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<tr>
<td>7-10</td>
<td>Analysis of illicit drugs</td>
</tr>
<tr>
<td>11, 12</td>
<td>Analysis of paints</td>
</tr>
<tr>
<td>13, 14</td>
<td>Analysis of glass and soils</td>
</tr>
<tr>
<td>15</td>
<td>Final mock case</td>
</tr>
</tbody>
</table>