Course Approval Form

For approval of new courses and deletions or modifications to an existing course.

registrar.gmu.edu/facultystaff/curriculum

Action Requested:

[X] Create new course [ ] Delete existing course

[ ] Modify existing course (check all that apply)

[ ] Title [ ] Credits [ ] Repeat Status [ ] Grade Type

[ ] Prereq/coreq [ ] Schedule Type [ ] Restrictions

[ ] Other: _____

Course Level:

[X] Undergraduate

[ ] Graduate

College/School: College of Science **Department:** Forensic Science Program

Submitted by: William Whildin **Ext:** 3-5059 **Email:** wwhildin@gmu.edu

Subject Code: FRSC **Number:** 304

(Do not list multiple codes or numbers. Each course proposal must have a separate form.)

Effective Term: [X] Fall [ ] Spring [ ] Summer *Year* 2011

Title: Current: Forensic Chemistry and Microscopy

Banner (30 characters max including spaces):

New:

Credits: (check one) [X] Fixed [ ] Variable 3 or to

Repeat Status: (check one) [X] Not Repeatable (NR) [ ] Repeatable within degree (RD) [ ] Repeatable within term (RT) Maximum credits allowed: 3

Grade Mode: (check one) [X] Regular (A, B, C, etc.) [ ] Satisfactory/No Credit [ ] Special (A, B C, etc. +IP)

Schedule Type Code(s): (check all that apply) [X] Lecture (LEC) [ ] Lab (LAB) [ ] Recitation (RCT) [ ] Internship (INT) [ ] Independent Study (IND) [ ] Seminar (SEM) [ ] Studio (STU)

Prerequisite(s):

Admitted to Forensic Science Program, CHEM 211, and CHEM 212; or permission of instructor

Corequisite(s):

Instructional Mode:

[X] 100% face-to-face

[ ] Hybrid: ≤ 50% electronically delivered

[ ] 100% electronically delivered

Special Instructions: (list restrictions for major, college, or degree;hard-coding; etc.)

Are there equivalent course(s)? [ ] Yes [X] No

If yes, please list _____

Catalog Copy for NEW Courses Only (Consult University Catalog for models)

Description (No more than 60 words, use verb phrases and present tense)	**Notes** (List additional information for the course)
Introduction to the theme of forensic science in its application to the fundamentals of chemistry exposing students to widely used concepts of toxicology and arson investigation. An introduction to microscopy helps students master the foundational principles of microscopy in analyzing forensic trace evidence.	

Indicate number of contact hours: Hours of Lecture or Seminar per week: 3 Hours of Lab or Studio:

When Offered: (check all that apply) [ ] Fall [ ] Summer [X] Spring

Approval Signatures

Department Approval Date

College/School Approval Date

If this course includes subject matter currently dealt with by any other units, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

For Graduate Courses Only

Graduate Council Member Provost Office Graduate Council Approval Date

For Registrar Office's Use Only: Banner_____Catalog_____ *revised 2/2/10*

Course Proposal Submitted to the Curriculum Committee of the College of Science

1. COURSE NUMBER AND TITLE:
FRSC 304: Forensic Chemistry and Microscopy

Course Prerequisites: Admitted to Forensic Science Program, CHEM 211, and CHEM 212; or permission of instructor.

Catalog Description: (3:3:0)
Introduction to the theme of forensic science in its application to the fundamentals of chemistry exposing students to widely used concepts of toxicology and arson investigation. An introduction to microscopy helps students master the foundational principles of microscopy in analyzing forensic trace evidence.

2. COURSE JUSTIFICATION:

Course Objectives:
The objectives of this course are for the student to be able to describe the different forms of evidence that may be at a crime scene, or submitted to a forensic laboratory for analysis. They will be exposed to the tests that may be conducted and the types of examinations performed by forensic scientists.

Course Necessity:
This course will introduce students to forensic chemical analysis and microscopy concepts of physical evidence in the criminal justice system and to specify what the field of criminalistics encompasses. This course will also build the students knowledge base for additional classes in this program.

Course Relationship to Existing Programs:

The new Forensic program is rapidly growing with tremendous interest. There is no course that examines forensic evidence and exposes the student to techniques used in the analysis of chemical and pattern evidence found at crime scenes.

Course Relationship to Existing Courses:
None

3. APPROVAL HISTORY: N/A

4. SCHEDULING AND PROPOSED INSTRUCTORS:

Semester of Initial Offering: Fall 2011

Proposed Instructors: Kimberly Carisi

5. TENTATIVE SYLLABUS: See attached.

FRSC 304
Forensic Chemistry and Microscopy

Prerequisites: Admitted to Forensic Science Program, CHEM 211, and CHEM 212; or permission of instructor

Instructor: Kimberly Carisi

Office Hours: By appointment

Course Description:
Introduction to the theme of forensic science in its application to the fundamentals of chemistry exposing students to widely used concepts of toxicology and arson investigation. An introduction to microscopy helps students master the foundational principles of microscopy in analyzing forensic trace evidence.

Lecture Content:
1. Introduction to Forensic Chemistry
2. Evidence collection and Preservation
3. Atomic clues: origins of atomic theory & foundations of modern atomic theory
4. Chemical Evidence
5. Drug chemistry - toxicology
6. Arson Investigations
7. Midterm
8. Introduction to Microscopy
9. Instruments and Methods of Forensic Analysis
10. Polarized Light Microscopy
11. Microscopy of Human Hair, Animal Hair, Natural Fibers
12. The Microscopy of Botanical and Biological Material
13. The Microscopy analysis of glass and paint
14. Project
15. Final

Project:
Students will be required to write a project paper on a selected topic in forensic microscopy/chemistry.

Exams: The midterm exam will be an in-class, closed book exam that will cover the topics in the previous weeks lecture. The final will be comprehensive and in the same format.

Grades: 30% Midterm, 30% Final, 30% Project, 10% Participation

Required Text:
An Introduction to Microscopy by Suzanne Bell, and Keith Morris
Forensic Chemistry, by Suzanne Bell