Course Approval Form

For instructions see:
http://registrar.gmu.edu/facultystaff/catalog-revisions/course/

Action Requested:

- [X] Create new course
- [ ] Inactivate existing course
- [ ] Modify existing course (check all that apply)
  - [ ] Title
  - [ ] Prereq/coreq
  - [ ] Other:
  - [1] Credits
  - [ ] Schedule Type
  - [ ] Repeat Status
  - [ ] Restrictions
  - [ ] Grade Type

Course Level:

- [ ] Undergraduate
- [X] Graduate

College/School: College of Science
Department: Forensic Science Program
Submitted by: Joseph A. DiZinno
Ext: 4985
Email: Jdizinn2@gmu.edu

Subject Code: FRSC
Number: 561
(Do not list multiple codes or numbers. Each course proposal must have a separate form.)

Effective Term:

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

Year 2016

Title:
Current
Banner (30 characters max w/ spaces) Forensic DNA Laboratory
New Forensic DNA Laboratory

Fulfills Mason Core Req? (undergrad only)

- [ ] Currently fulfills requirement
- [ ] Submission in progress

Credits: (check one)

- [1] Fixed
- [ ] Variable

or
to

Repeat Status: (check one)

- [X] Not Repeatable (NR)
- [ ] Repeatable within degree (RD)
- [ ] Repeatable within term (RT)

Maximum credits allowed: 1

Grade Mode: (check one)

- [X] Regular (A, B, C, etc.)
- [ ] Satisfactory/No Credit
- [ ] Special (A, B C, etc. +IP)

Schedule Type: (check one) LEC can include LAB or RCT

- [ ] Lecture (LEC)
- [X] Lab (LAB)
- [ ] Recitation (RCT)
- [ ] Internship (INT)
- [ ] Independent Study (IND)
- [ ] Seminar (SEM)
- [ ] Studio (STU)

Prerequisite(s):
None

Corequisite(s):
FRSC 560

Instructional Mode:

- [X] 100% face-to-face
- [ ] Hybrid: ≤ 50% electronically delivered
- [ ] 100% electronically delivered

Restrictions Enforced by System: Major, College, Degree, Program, etc. (include code)
None

Equivalencies: (check only as applicable)

- [ ] YES, course is 100% equivalent to: _____
- [ ] YES, course is being renumbered to/will replace the following: _____

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)
This laboratory course will provide comprehensive coverage of the various types of DNA testing currently used in forensic biology laboratories. Students will have hands-on experience with the analytical equipment employed and the techniques used for human identification in forensic casework, such as, DNA extraction, quantitation, PCR amplification, genotyping, and interpretation.	

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

When Offered: (check all that apply) [X] 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 6/22/15

Course Proposal Submitted to the College of Science Curriculum Committee (COSCC)

The form above is processed by the Office of the University Registrar. This second page is for the COSCC's reference. Please complete the applicable portions of this page to clearly communicate what the form above is requesting.

FOR ALL COURSES (required)

Course Number and Title: FRSC 561/Forensic DNA laboratory

Date of Departmental Approval: 11/23/15

FOR INACTIVATED/REINSTATED COURSES (required if inactivating/reinstating a course)

- Reason for Inactivating/Reinstating:

FOR MODIFIED COURSES (required if modifying a course)

- Summary of the Modification:
- Text before Modification (title, repeat status, catalog description, etc.):
- Text after Modification (title, repeat status, catalog description, etc.):
- Reason for the Modification:

FOR NEW COURSES (required if creating a new course)

Reason for the New Course: Forensic DNA analysis plays an important role in forensic investigations. GMU Forensic Science Program graduate students are currently lacking instruction in this area and this course will provide valuable instruction/experience for GMU Forensic Science Program Graduate Students in the Forensic Biology Analysis Concentration.

Relationship to Existing Programs: The Forensic DNA Laboratory Course will be a core course requirement for the GMU Forensic Science Program graduate Forensic Biology Analysis Concentration and will also be offered as an elective course for the GMU Forensic Science Program, Forensic Chemistry Analysis and Crime Scene Investigation Concentrations.

Relationship to Existing Courses: : The Forensic DNA Laboratory Course is a new course which significantly enhances the GMU Forensic Science Program graduate Forensic Biology Analysis Concentration as a core course and offers an elective course choice for students enrolled in the GMU Forensic Science Program, Forensic Chemistry Analysis and Crime Scene Investigation Concentrations.

Semester of Initial Offering: Fall 2016

Proposed Instructors: Assistant Professor Kelly Knight, Forensic Science Program

- Insert Tentative Syllabus Below

GEORGE MASON UNIVERSITY
FORENSIC DNA LABORATORY - FRSC 561 000

Instructor: **Assistant Professor, Kelly Knight**

Office: **Exploratory Hall Suite 3400**

Email: **fscience@gmu.edu**

Phone #: **703-993-5071 (main desk)**

Text: **N/A**

Course Description: This laboratory course will provide comprehensive coverage of the various types of DNA testing currently used in forensic science laboratories. Students will have hands-on experience with the analytical equipment employed in forensic science laboratories and the techniques for human identification in forensic casework. This first half of the course will focus on the fundamentals of evidence handling and preparation, the application of chemical, immunological, and microscopic methods for the examination and identification of body fluid stains, as well as species determination of body fluids. The second portion of the course is designed to give students an overview of forensic DNA analysis and will provide students with practical working knowledge of basic molecular biology procedures as applied to forensic biology including DNA extractions, quantitation, PCR amplification, genotyping, profile analysis, and statistical calculations.

Course Corequisites: FRSC 560 (Lecture)

Course Objectives:

- Development of basic biological and molecular laboratory skills, including proficient use of alternate light sources, micropipettes, centrifuges, microscopes, thermal cyclers, and capillary electrophoresis
- Ability to understand and perform forensic serological and DNA analysis procedures, draw logical conclusions based on data obtained, and present information in a scientific format
- An understanding of evidence handling and quality control measures

Required Materials:

- Lab coat, 3-ring binder & tabbed dividers, calculator, closed-toe shoes, safety goggles
- Books – There is no *required* textbook for this laboratory however, it is assumed that students have an understanding of the relevant material covered in the corresponding chapters of the lecture section (FRSC 560) textbook prior to each session.

Blackboard:

- ALL assigned readings and laboratory handouts will be posted in the Course Documents area of this course on Blackboard.
    - Required readings may include websites, document files, product inserts, journal articles, lab procedures, manuals, or other relevant laboratory material.
- Course Documents for each session should be *printed, reviewed and read* thoroughly *prior* to class time, including lab handouts and readings – no extra copies will be available at class time.
- All assignments are due on the dates indicated in the syllabus.

Class Policies:

Attendance

- Attendance for ALL labs is mandatory.
- Attendance will be recorded at the beginning of each class period.
    - Students who are more than 15 minutes late for the labs without notice will be counted as ***absent*** for that class, even if they arrive later.
    - 15 points will be deducted from the Lab Notebook score for *each* unexcused absence.
    - Excused absences will *only* be considered when/if proper documentation of the absence is provided.

Make-up Labs / Late Work

- There will be **no** make-up labs given under *any* circumstances.
- No late writing assignments will be accepted.
    - In the case of an excused absence, 10% of point value will be deducted from the score.

Lab Practicals

- Exams will be based in part on demonstration of laboratory skills, but will also include theory from the lecture section.
- Calculators (non-programmable) will be allowed during exams-scratch paper will be provided.

Course Evaluation

- Participation (10%)
- Lab Notebook (10%)
- Practicals (Midterm & Final) (30%)
- Lab Assignments/Reports (50%)

Grading Scale:

100 A+	89-87 B+	79-70 C
99-95 A	86-83 B	69 and below F
94-90 A-	82-80 B-	

UNIVERSITY RESOURCES

GMU Honor Code:

Standards of academic integrity as set forth by the University are strictly observed and rigorously enforced in this class. The complete Honor Code is as follows: *To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code:* **Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.**

In this class, because coursework will be collaborative at times, particular issues of integrity arise. You should not copy or print another student's work without permission. Any material (this includes IDEAS and LANGUAGE) from another source must be credited, whether that material is quoted directly, summarized, or paraphrased. In other words, you should respect the work of others and in no way present it as your own.

GMU Email: http://masonlive.gmu.edu

Each student is responsible for activating their GMU email account and checking their account on a regular basis for University and class announcements**. All masonlive accounts must be activated.**

GMU Police Policy: 703-993-2810

If you are currently employed with a law enforcement agency as a sworn officer and would like to carry a firearm on campus and into class, you must contact GMU Police Department as a courtesy.

GMU Students with Disabilities: http://ods.gmu.edu
If you are a student with a disability and you need academic accommodations, please contact the Office of Disability Resources at 703-993-2474. All academic accommodations must be arranged through that office, your instructor is not obligated to provide accommodations without documentation from ODS.

Writing Center: http://writingcenter.gmu.edu
For general questions and comments please contact wcenter@gmu.edu or call:
703-993-1200 (Robinson Hall A114, Fairfax Campus)
703-993-1824 (Enterprise Hall 076, Fairfax Campus)
All appointments are made through the online scheduling system so please do not email or call to schedule appointments. If you would like to cancel an appointment you may do so via the online scheduler, simply select your appointment and click the "Cancel appointment" box at the bottom of the reservation form and then "save.

University Libraries: "Ask a Librarian" http://library.gmu.edu/mudge/IM/IMRef.html
Margaret Lam, Physical Sciences Liaison Librarian; http://infoguides.gmu.edu/forensics
Fenwick Library, A244, 703-993-2212
mlam3@gmu.edu

Counseling and Psychology Services (CAPS): (703) 993-2380; http://caps.gmu.edu

University Policies:
The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at http://universitypolicy.gmu.edu/. All members of the university community are responsible for knowing and following established policies.