

# Course Change Request

Date Submitted: 11/09/20 10:59 pm

Viewing: **FRSC 304 : Forensic Chemistry**

Last approved: 05/15/20 4:44 am

Last edit: 11/09/20 10:59 pm

Changes proposed by: kcarisi

Catalog Pages  
referencing this  
course

[Forensic Science \(FRSC\)](#)

[Forensic Science Program](#)

Select modification type:

Substantial

## In Workflow

1. **FRSC Representative**
2. **SC Curriculum Committee**
3. SC Associate Dean
4. Assoc Provost- Undergraduate
5. Registrar-Courses
6. Banner

## Approval Path

1. 11/09/20 11:02 pm  
Kimberly Rule  
(kcarisi): Approved  
for FRSC  
Representative

## History

1. Aug 25, 2017 by  
pchampan
2. Dec 21, 2018 by  
Kimberly Rule  
(kcarisi)
3. May 15, 2020 by  
Tory Sarro (vsarro)

Are you completing this form on someone else's behalf?

Yes ~~No~~

Requestor:

Name	Extension	Email

Name	Extension	Email
Brian Eckenrode	703-993-5071	beckenro@gmu.edu

**Effective Term:** Fall 2021

**Subject Code:** FRSC - Forensic Science

**Course Number:** 304

**Bundled Courses:**

**Is this course replacing another course?** No

**Equivalent Courses:**

**Catalog Title:** Forensic Chemistry

**Banner Title:** Forensic Chemistry

**Will section titles vary by semester?** No

**Credits:** 3

**Schedule Type:** Lecture

**Hours of Lecture or Seminar per week:** 3

**Repeatable:** May be only taken once for credit, limited to 3 attempts (N3)

**Max Allowable Credits:**  
9

**Default Grade Mode:** Undergraduate Regular

**Recommended Prerequisite(s):**

**Recommended Corequisite(s):**

**Required Prerequisite(s) / Corequisite(s) (Updates only):**

**Minimum grade of C or higher in CHEM 313, CHEM 315**

**Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):**

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
	(	FRSC 200	C	UG		
Or		FRSC 200	XS	UG	)	

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
And	(	FRSC 201	C	UG		
Or		FRSC 201	XS	UG	)	
And	(	CHEM 211	C	UG		
Or		CHEM 211	XS	UG	)	
And	(	CHEM 213	C	UG		
Or		CHEM 213	XS	UG	)	
And	(	CHEM 212	C	UG		
Or		CHEM 212	XS	UG	)	
And	(	CHEM 214	C	UG		
Or		CHEM 214	XS	UG	)	

**Registration  
Restrictions  
(Updates only):**

**Registrar's Office Use Only - Registration Restrictions:**

**Field(s) of Study:**

**Class(es):**

**Level(s):**

**Degree(s):**

**School(s):**

**Catalog  
Description:**

Introduction to the chemical principles and methods used in the application of forensics toward the elucidation of criminal activity and to support litigation. Students will be learning the fundamentals of statistics (QA/QC), chromatography (GC and LC), and instrumentation (microscopy, FTIR, and MS) that will enable forensics analysis of trace evidence relating to: drugs, explosives, toxicology, arson, firearms, volatiles, and hair/fibers.

**Justification:**

Justification (What is the proposed modification?): The Forensic Science Program is proposing the addition of two pre-requisites to FRSC 304 Forensic Chemistry to include CHEM 313 and CHEM 315 Organic Chemistry I lecture and laboratory, these will be in addition to the current pre-requisites.

Justification (Why is this modification necessary?): The Forensic Chemistry FRSC 304 class is designed for juniors or seniors as part of the Bachelor of Science in Forensic Science degree. In this class, many of the analytes targeted for measurement and analysis are organic compounds. The course content assumes that students have a background in organic chemistry and have completed the introductory coursework (CHEM 313) as well as an associated laboratory (CHEM 315). In addition, the student is introduced to aspects of the instrumentation required to accomplish a forensics chemical analysis that rely on a basic understanding of the chemistry involved including organic chemical sub-structures and functional groups. In the analytical technique of mass spectrometry taught in FRSC 304, for example, the student is introduced to ionization, bond breaking, and selected ion reaction monitoring for chemical specificity required in forensic chemical analysis and an understanding of the chemistry fundamentals provided in an introductory organic chemistry course is necessary.

**Does this course cover material which crosses into another department?** No

**Learning Outcomes:**

**Attach Syllabus**

[FRSC 304 Forensic Chemistry Syllabus.pdf](#)

**Additional Attachments**

**Specialized Course**

**Categories:**

Writing Intensive

**Additional Comments:**

**Reviewer Comments**