# **Program Change Request**

Date Submitted: 10/08/23 10:41 am

# Viewing: SC-MS-FRSC : Forensic Science, MS

Last approved: 04/24/23 9:05 pm

### Last edit: 10/08/23 10:41 am

Changes proposed by: jbazaz

Forensic Science, MS

Catalog Pages Using this Program

# Are you completing this form on someone else's behalf? Yes **Requestor:** Name Extension Email **Kimberly Rule** 5338 kcarisi **Effective Catalog:** 2024-2025 Program Level: Graduate Program Type: Master's Degree Type: Master of Science Title: Forensic Science, MS **Banner Title:** Forensic Science, MS Registrar/OAPI Use Approved Only - SCHEV Status **Registrar's Office** Use Only -**Program Start Term Registrar/OAPI Use** Only – SCHEV Letter Registrar/OAPI Use Only - SACSCOC Status Concentration(s):

	Associated Concentrations	Registrar's Office Use Only: Concentration Code
1	Crime Scene Investigation	CSIN
2	Forensic Biology Analysis	FRSB
3	Forensic Chemistry Analysis	FRCA
4	Forensic/Biometric Identity Analysis	FRBI

Registrar/IRR Use Only – Concentration CIP Code

College/School:

# In Workflow

- 1. FRSC Chair 2. SC Curriculum Committee
- SC Assistant Dean
  Assoc Provost-
- Graduate
- 5. Registrar-Programs

## **Approval Path**

1. 10/09/23 9:12 pm Kimberly Rule (kcarisi): Approved for FRSC Chair

## History

- 1. Nov 8, 2017 by clmig-jwehrheim
- 2. Jan 29, 2018 by rzachari
- 3. Jan 30, 2018 by rzachari
- 4. Mar 6, 2018 by rzachari
- 5. Mar 7, 2018 by pchampan
- 6. Dec 7, 2018 by Jennifer Bazaz Gettys (jbazaz)
- 7. Dec 5, 2019 by Jennifer Bazaz Gettys (jbazaz)
- 8. Feb 23, 2021 by jriemen
- 9. Feb 3, 2022 by Jennifer Bazaz Gettys (jbazaz)
- 10. May 17, 2022 by Tory Sarro (vsarro)
- 11. Apr 24, 2023 by Jennifer Bazaz Gettys (jbazaz)

College of Science	
Department / Academic Unit:	Forensic Science Program
Jointly Owned Program?	No
Justification	What: Adding new course FRSC 660 FARO Forensic 3D Documentation as an elective to all 4
	concentrations in the MS degree.
	Why: The newly proposed course FRSC 660 FARO Forensic 3D Documentation will be a great
	addition to the elective course offerings for all 4 concentrations of the MS degree.
Total Credits Required:	Total credits: 36
Registrar's Office Use Only - Program Code:	
	SC-MS-FRSC
Registrar/IRR Use Only – Program CIP Code	
Admission Requirements:	

# Admissions

# **Application Requirements**

University-wide admissions policies can be found in Graduate Admissions Policies.

To apply for this program, please complete the George Mason University Admissions Application.

In addition to fulfilling Mason's admission requirements for graduate study, applicants must provide:

- Three letters of recommendation from academic references or references in the industry or government who are familiar with the applicant's academic and/or professional accomplishments.
- A current resume.
- Detailed goal statement to include why you are interested in coming into Mason's Forensic Science Master's program, career goals, and professional aspirations. Forensic Biology and Forensic Chemistry concentration applicants must also include their proposed area of interest for their final research project.
- A copy of official transcripts from each institution of higher education attended.

In addition to the general admission requirements, international students and students having earned international degrees should also refer to <u>Admission of International</u> <u>Students</u> and <u>International Application Procedures</u> for additional requirements. Non-native English-speaking applicants are required to meet the university's <u>English</u> <u>Language Proficiency Requirements</u>.

#### Language Pronciency Requirements.

The GRE is not required for admission into this program. Additional requirements for each specific concentration are listed below.

# **Concentration-Specific Requirements**

Forensic Biology Analysis and Forensic Chemistry Analysis Concentrations

A bachelor's degree in a forensic or natural science.

# Forensic/Biometric Identity Analysis Concentration

A bachelor of science or bachelor of arts degree in a forensic or natural science, computer science, computer electronic or electrical engineering, information systems or information technology (or its equivalent coursework in a relevant field).

# Crime Scene Investigation Concentration

A bachelor of science or bachelor of arts degree in a related field.

#### Program-Specific Policies:

# **Policies**

For policies governing all graduate programs, see AP.6 Graduate Policies.

# **Premium Tuition**

Students enrolled in this professional MS program are charged at a differential (premium) tuition rate. Therefore, any courses or secondary programs that they may enroll in are subject to the differential tuition rate. The Forensics Graduate Certificate has the same premium tuition rate, making it the ideal program for concurrent enrollment (if desired).

# **Concentration Declaration**

Students must declare their intended concentration upon application. In the event that a student wishes to change their concentration, students may request to change their concentration by submitting a letter to the Forensic Science Program Director detailing the request and providing justification. These requests and possible substitutions/waivers will be considered on a case-by-case basis and only when the appropriate admissions requirements are met.

# **Criminal Background Check**

The successful passing of a <u>Virginia Department of Forensic Sciences</u> background check is required prior to gaining access to <u>FRSC 540</u> Advanced Forensic Chemistry, <u>FRSC 541</u> Forensic Chemistry Laboratory, <u>FRSC 560</u> Advanced Forensic DNA Sciences, and <u>FRSC 561</u> Forensic DNA Laboratory.

## **Course Notes**

#### FRSC 560 Advanced Forensic DNA Sciences and FRSC 561 Forensic DNA Laboratory

Students shall have completed undergraduate coursework in molecular and/or cell biology, as well as genetics, or students must obtain permission of the instructor prior to taking FRSC 560 Advanced Forensic DNA Sciences and FRSC 561 Forensic DNA Laboratory.

#### FRSC 540 Advanced Forensic Chemistry and FRSC 541 Forensic Chemistry Laboratory

Students shall have completed undergraduate coursework in general chemistry including polarity and acid/base chemistry. Students shall also have completed Organic Chemistry and be able to identify functional groups and other chemistry structures that make up a molecule. Exposure to instrumental techniques such as gas chromatography, mass spectrometry and infrared spectroscopy is recommended or permission of instructor.

#### **Degree Requirements:**

Students should refer to the <u>Admissions & Policies</u> tab for specific policies related to this program. Select one concentration from the following:

# Concentration in Crime Scene Investigation (CSIN)

This concentration educates students for a career as a crime scene investigator.

FRSC 500	Introduction to Forensic Science
FRSC 510	Basic Crime Analysis
FRSC 511	Advanced Crime Scene Analysis
FRSC 530	Law and Forensic Science
FRSC 570	Trace and Physical Evidence Concepts

Research Project or Non-Research Project

**Research Project Option** 

The Research Project Option is designed for students planning to pursue a doctoral degree or a career involving research in the field of forensic science or other related disciplines. The research project is based on laboratory research that must be preapproved by the advisory committee, which is appointed during the first semester of registration in <u>FRSC 610</u> (1 credit) Forensic Research Project. Students are responsible for selecting research advisors who can commit as an advisor during the semesters that the student indicates that they will be conducting their research and enrolled in <u>FRSC 610</u>. Students must then complete their written research project and present their research during an oral defense during the semester of registration in <u>FRSC 610</u> (4 credit) Forensic Research Project.

FRSC 600	Forensics Seminar
FRSC 601	Quantitative Methods for Forensic Scientists
FRSC 610	Forensic Research Project

Non-Research Project Option

Students selecting this option are not required to complete a laboratory-based research project. Instead, they must successfully pass <u>FRSC 699</u> (0 credits) Forensic Comprehensive Examination to demonstrate thorough comprehension of the curriculum and must select 8-9 credits of additional elective coursework.

FRSC 699 Comprehensive Examination Select 8-9 credits of additional FRSC elective courses

Electives		12-
Select 12-13 credits fror	n the following courses to reach a total of 36 credits:	15
FRSC 512	Physical Evidence Laboratory	
FRSC 513	Forensic Photography	
FRSC 514	Survey of Forensic Chemistry, Biology, and DNA Analysis	
FRSC 515	Selected Topics in Forensic Science	
FRSC 516	Forensic Drone Photography	
FRSC 517	Questioned Document Examination	
FRSC 518	Analytical Thinking Violent Crime Profiling	
FRSC 520	Toxicology	
FRSC 525	Molecular Biology	
FRSC 526	Molecular Biology Laboratory	

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<u>FRSC 550</u>	Issues in Forensic Anthropology
FRSC 580	Facial Reconstruction
FRSC 590	Medicolegal Death Investigation and Pathology
FRSC 600	Forensics Seminar
FRSC 620	Face and Biometric Pattern Analysis
FRSC 630	Fingerprint Identification
FRSC 640	Legal, Privacy and Ethical Issues in Identity Analysis
FRSC 650	Identity Analysis Applications
FRSC 660	FARO Forensic 3D Documentation
FRSC 670	Forensic Genomics
FRSC 690	Capstone - Moot Court Expert Testimony
FRSC 790	Internship in Forensic Science (Credits: 1-6)
Total Credits	

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# **Concentration in Forensic Biology Analysis (FRSB)**

This concentration educates students for a career as a forensic biology laboratory analyst.

The successful passing of a Virginia Department of Forensic Sciences background check is required prior to gaining access to <u>FRSC 560</u> Advanced Forensic DNA Sciences and <u>FRSC 561</u> Forensic DNA Laboratory. In order to obtain a career as a DNA Analyst, the student should have undergraduate coursework in Statistics, Molecular Biology, Genetics, and Biochemistry.

Сс	ore Courses		30
	FRSC 500	Introduction to Forensic Science	
	FRSC 510	Basic Crime Analysis	
	FRSC 512	Physical Evidence Laboratory	
	or <u>FRSC 630</u>	Fingerprint Identification	
	FRSC 514	Survey of Forensic Chemistry, Biology, and DNA Analysi	S
	FRSC 530	Law and Forensic Science	
	FRSC 560	Advanced Forensic DNA Sciences	
	& <u>FRSC 56</u> 2	and Forensic DNA Laboratory	
	FRSC 570	Trace and Physical Evidence Concepts	
	FRSC 600	Forensics Seminar	
	FRSC 601	Quantitative Methods for Forensic Scientists	
	FRSC 610	Forensic Research Project	
Ele	ectives		6
Se	lect 6 credits fr	rom the following courses:	
	FRSC 511	Advanced Crime Scene Analysis	
	FRSC 512	Physical Evidence Laboratory	
	FRSC 513	Forensic Photography	
	FRSC 515	Selected Topics in Forensic Science	
	FRSC 516	Forensic Drone Photography	
	FRSC 517	Questioned Document Examination	
	FRSC 518	Analytical Thinking Violent Crime Profiling	
	FRSC 520	Toxicology	
	FRSC 525	Molecular Biology	
	FRSC 526	Molecular Biology Laboratory	
	FRSC 550	Issues in Forensic Anthropology	
	FRSC 580	Facial Reconstruction	
	FRSC 590	Medicolegal Death Investigation and Pathology	
	FRSC 600	Forensics Seminar	
	FRSC 620	Face and Biometric Pattern Analysis	
	FRSC 630	Fingerprint Identification	
	FRSC 640	Legal, Privacy and Ethical Issues in Identity Analysis	
	FRSC 650	Identity Analysis Applications	
	FRSC 660	FARO Forensic 3D Documentation	
	FRSC 670	Forensic Genomics	
	FRSC 690	Capstone - Moot Court Expert Testimony	
	FRSC 790	Internship in Forensic Science (Credits: 1-6)	

Total Credits

36

# **Concentration in Forensic Chemistry Analysis (FRCA)**

This concentration educates students for a career as a forensic chemistry laboratory analyst.

## SC-MS-FRSC: Forensic Science, MS

The successful passing of a Virginia Department of Forensic Sciences background check is required prior to gaining access to FRSC 540 Advanced Forensic Chemistry and FRSC 541 Forensic Chemistry Laboratory.

Core Courses		33
FRSC 500	Introduction to Forensic Science	
FRSC 510	Basic Crime Analysis	
FRSC 512	Physical Evidence Laboratory	
or <u>FRSC 630</u>	Fingerprint Identification	
FRSC 514	Survey of Forensic Chemistry, Biology, and DNA Analys	is
FRSC 520	Toxicology	
FRSC 530	Law and Forensic Science	
FRSC 540	Advanced Forensic Chemistry	
& <u>FRSC 54</u>	1 and Forensic Chemistry Laboratory	
FRSC 570	Trace and Physical Evidence Concepts	
FRSC 600	Forensics Seminar	
FRSC 601	Quantitative Methods for Forensic Scientists	
FRSC 610	Forensic Research Project	
Electives		3
Select 3 credits f	rom the following courses:	
FRSC 511	Advanced Crime Scene Analysis	
FRSC 512	Physical Evidence Laboratory	
FRSC 513	Forensic Photography	
FRSC 515	Selected Topics in Forensic Science	
FRSC 516	Forensic Drone Photography	
FRSC 517	Questioned Document Examination	
FRSC 518	Analytical Thinking Violent Crime Profiling	
FRSC 525	Molecular Biology	
FRSC 526	Molecular Biology Laboratory	
FRSC 550	Issues in Forensic Anthropology	
FRSC 580	Facial Reconstruction	
FRSC 590	Medicolegal Death Investigation and Pathology	
FRSC 600	Forensics Seminar	
FRSC 620	Face and Biometric Pattern Analysis	
FRSC 630	Fingerprint Identification	
FRSC 640	Legal, Privacy and Ethical Issues in Identity Analysis	
FRSC 650	Identity Analysis Applications	
FRSC 660	FARO Forensic 3D Documentation	
FRSC 670	Forensic Genomics	
FRSC 690	Capstone - Moot Court Expert Testimony	
FRSC 790	Internship in Forensic Science (Credits: 1-6)	
Total Credits		36

**Total Credits** 

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# **Concentration in Forensic/Biometric Identity Analysis (FRBI)**

This concentration educates students for a career as an identity intelligence analyst.

Core Courses	
FRSC 500	Introduction to Forensic Science
FRSC 510	Basic Crime Analysis
FRSC 514	Survey of Forensic Chemistry, Biology, and DNA Analysis
FRSC 530	Law and Forensic Science
FRSC 620	Face and Biometric Pattern Analysis
FRSC 630	Fingerprint Identification
FRSC 640	Legal, Privacy and Ethical Issues in Identity Analysis
FRSC 650	Identity Analysis Applications

Research Project or Non-Research Project

### **Research Project Option**

The Research Project Option is designed for students planning to pursue a doctoral degree or a career involving research in the field of forensic science or other related disciplines. The research project is based on laboratory research that must be preapproved by the advisory committee, which is appointed during the first semester of registration in FRSC 610 (1 credit) Forensic Research Project. Students are responsible for selecting research advisors who can commit as an advisor during the semesters that the student indicates that they will be conducting their research and enrolled in FRSC 610. Students must then complete their written research project and present their research during an oral defense during the semester of registration in FRSC 610 (4 credits) Forensic Research Project.

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FRSC 600	Forensics Seminar
FRSC 601	Quantitative Methods for Forensic Scientists
FRSC 610	Forensic Research Project

Non-Research Project Option

Students selecting this option are not required to complete a laboratory-based research project. Instead, they must successfully pass <u>FRSC 699</u> (0 credits) Forensic Comprehensive Examination to demonstrate thorough comprehension of the curriculum and must select 8-9 credits of additional elective coursework.

FRSC 699

Select 8-9 credits of additional FRSC elective courses

Electives

Select 3-4 credits from the following courses to reach a total of 36 credits:

Comprehensive Examination

FRSC 511	Advanced Crime Scene Analysis
FRSC 512	Physical Evidence Laboratory
FRSC 513	Forensic Photography
FRSC 515	Selected Topics in Forensic Science
FRSC 516	Forensic Drone Photography
FRSC 517	Questioned Document Examination
FRSC 518	Analytical Thinking Violent Crime Profiling
FRSC 520	Toxicology
FRSC 525	Molecular Biology
FRSC 526	Molecular Biology Laboratory
FRSC 550	Issues in Forensic Anthropology
FRSC 570	Trace and Physical Evidence Concepts
FRSC 580	Facial Reconstruction
FRSC 590	Medicolegal Death Investigation and Pathology
FRSC 600	Forensics Seminar
FRSC 660	FARO Forensic 3D Documentation
FRSC 670	Forensic Genomics
FRSC 690	Capstone - Moot Court Expert Testimony
FRSC 790	Internship in Forensic Science (Credits: 1-6)
<u>AIT 678</u>	National Security Challenges

Total Credits

Retroactive Requirements Updates:

Plan of Study:

**Program Outcomes** 

### **Additional Program Information**

This information is required by the Office of Accreditation and Program Integrity.

Courses offered via distance (if applicable):

What is the primary delivery format for the program?	Face-to-Face Only
Does any portion of	this program occur off-campus?
	Yes
Off-campus details:	The following courses are taught off site:
	1. FRSC 520, 3 credits
	2. FRSC 540, 3 credits
	3. FRSC 541, 1 credit
	4. FRSC 560, 3 credits
	5. FRSC 561, 1 credit
	6. FRSC 590, 3 credits
Are you working wit	h a vendor / other collaborators to offer your program?
	Yes

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10/10/23, 9:56 AM	SC-MS-FRSC: Forensic Science, MS
Please explain:	The off site courses are taught at the Virginia Department of Forensic Science Laboratory.
Related Departments	
Could this program Virginia or elsewhe	prepare students for any type of professional licensure, in re?
	No
Are you adding or removing a licensure component? No	
Additional SCH	EV & SACSCOC Information
Is this change a sim	ple retitling of an existing program, with no other changes, to any existing program content, curriculum requirements, etc? No
Does this change re doctoral)?	present a repackaging of content in an existing approved degree/certificate program at the same instructional level (i.e., baccalaureate, master's, o
	No
Percentage of total approved degree/ce	credits containing new course content. ("New course content" is defined by SACSCOC as content that is not currently included in an existing ertificate program at the same instructional level. Do not exclude gen ed credits in calculations for undergraduate programs.) 0%-24%
Does this change in	clude the addition of a distance education or face-to-face method of delivery for this program? No
Does this change in	clude the addition of a course/credit-based competency-based education delivery option?
	No
Will any additional	equipment/facilities be needed?
	No
Will any additional	faculty be required?
will any additional t	No
Additional library/le	earning resources needed?
, automatinistary, a	No
OAPI Use Only	– Determination of SACSCOC Impact
Comments or Notes	s
Green Leaf Pro	gram Designation
Is this a Green Leaf program?	No
Does this program o	cover material which crosses into another department? No
Additional Attachments	Retroactive PAF- Master of Science Forensic Science 8-11-2021.pdf
SCHEV Proposal	
Executive Summary	

AdditionalMason Science has a memo on file to explain why most, but not all, of this master's<br/>concentrations have a core overlap of 50%.

Is this course required of all students in this degree program?

Reviewer Comments %wi\_required.eschtml%