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# **Bachelor of Science in Forensic Science (BSFS)**



Undergraduate Student Handbook  
(Rev. 2021)

Bowling Green State University  
Bowling Green, Ohio 43403

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This *Forensic Science Undergraduate Handbook* is a supplement to the BGSU Student Handbook, (<https://www.bgsu.edu/student-handbook.html>) University Policies, and rules which should be consulted for details concerning University policies pertaining to the undergraduate programs.

Be certain to study the *Forensic Science Undergraduate Handbook* and learn the various requirements early. **YOU**, the student, **are responsible** for fulfilling all graduation requirements.

If you have any questions about policies and programs in this handbook, please consult with your advisor in the Center for the Future of Forensic Science Program Office.

***The program faculty and staff wish you all the best in your undergraduate experience at BGSU!***

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## TABLE OF CONTENTS

1	PURPOSE AND OVERVIEW .....	6
1.1	The Center .....	6
1.2	The State of Forensic Science.....	7
1.3	Uniqueness .....	7
1.4	Program Goals and Objectives .....	7
1.5	Mission Statement .....	8
1.6	Vision Statement.....	8
1.7	BGSU Vision, Mission and Core Values .....	8
1.8	Institutional Accreditation .....	8
1.9	Current Employment Market .....	9
1.10	Background Checks.....	10
2	Admissions.....	11
3	Declaring a Minor .....	12
4	Accelerated Bachelor’s to Master’s Program .....	13
5	Program Support .....	15
5.1	Photo ID/BG1 Card .....	15
5.2	SOAR .....	15
5.3	Fall Welcome .....	15
5.4	MyBGSU.....	15
5.5	DARS .....	16
5.6	Advising.....	17
5.7	Forensic Science Learning Community .....	17
5.8	Delta Delta Epsilon.....	17
5.9	Professional Involvement .....	18
5.10	Student Support Services.....	19
5.11	Accessibility Services .....	19
5.12	BGSU Libraries (Jerome Library) & The Learning Commons .....	20

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5.13	OhioLINK .....	20
5.14	Writing Center .....	21
5.15	Technology Support.....	21
5.16	Computer Resources .....	22
5.17	Career Planning and Placement Services .....	22
6	LEARNING OUTCOMES .....	23
7	CURRICULA .....	26
7.1	Academic Load.....	29
7.2	Sample Academic Plan – Forensic Biology.....	30
7.3	Sample Academic Plan – Forensic Chemistry .....	32
7.4	Sample Academic Plan – Forensic Examinations.....	34
8	COURSE DESCRIPTIONS .....	36
9	Self-Directed Course Enrollment (Adding Classes).....	44
10	Progression and Performance Policy.....	47
11	Academic Calendars.....	47
12	BGSU Catalog .....	48
13	Grading Policy .....	48
14	Academic Honesty .....	48
15	Grievances .....	49
15.1	Student Complaint Procedure .....	49
15.2	Student Rights Notification .....	49
15.3	Complaint Process .....	49
15.4	Complaint Record.....	49

## 1 PURPOSE AND OVERVIEW

The Bachelor of Science with a major in Forensic Science (BSFS) degree program is designed for students interested in the application of scientific principles to forensic evidence. The Forensic Science major provides students with a strong background in chemistry, biology, and scientific instrumentation with additional exposure to all aspects of forensic science.

By offering three distinct forensic science specializations under the umbrella of the Bachelor of Science with a major in Forensic Science degree program (Forensic Biology, Forensic Chemistry and Forensic Examination), BGSU students have the ability to select the precise forensic curricula that will prepare them to achieve their career goals.

- The *Forensic Biology* specialization prepares students for positions as DNA analysts, performing blood and other biological material testing on all types of physical evidence to help solve crime through the discriminating power genetic testing.
- The *Forensic Chemistry* specialization prepares students for positions as drug chemists and forensic toxicologists. These scientists utilize the latest technologies to identify legally controlled substances and other dangerous drugs or unknown materials.
- The *Forensic Examination* specialization prepares students for positions as trace evidence analysts, latent fingerprint examiners, firearm and toolmark examiners, and crime scene responders. Students selecting this specialization will learn how to examine 'impression' type evidence such as finger and palm prints, footwear, tires, bullets, cartridge casings, as well as understand the science and technologies associated with the forensic analysis of paint, glass, hair, fiber, gunshot residues, vehicle lamps and more.

Students completing this major would be well prepared for a graduate Forensic Science program, medical school, or employment in a crime, research, or medical laboratory.

### 1.1 The Center

The Bowling Green State University (BGSU) Forensic Science Degree Programs are the product of the rare placement of a world-class crime laboratory on the campus of an internationally recognized academic institution. The location of an Ohio Attorney General Bureau of Criminal Investigation (BCI) crime laboratory and investigation facility at BGSU created a natural symbiotic relationship between the two institutions. That relationship evolved into a formal partnership agreement under the name *Ohio Attorney General's Center for the Future of Forensic Science at BGSU* (The Center). The Center serves to facilitate forensic science academic programming, research, and real-world practitioner training.

<https://www.bgsu.edu/forensic-science/about.html>

## 1.2 The State of Forensic Science

Forensic science is critical to an effective justice system, which in turn is a pillar of a civil society. It is an interdisciplinary field that includes chemistry as a foundational and integral component. Physical evidence presented in courts is frequently analyzed using forensic science techniques that are often grounded in chemical principles and methods. The credibility of the legal system critically depends on forensic tests that are consistent, accurate, and scientifically valid.

However, modern forensic science faces enormous challenges. The 2009 National Academies report, *Strengthening Forensic Science in the United States: A Path Forward*, enumerated the problems of the forensic science community in detail. The report noted that due to its history, its interdisciplinary and applied nature, and its close ties to law enforcement and the legal system, forensic science has not developed a culture that reflects important aspects of how science is conducted. Therefore, the necessary work to establish validity and reliability in analytical methods that are hallmarks of other scientific fields is often weak or absent in forensic science. Strengthening the scientific foundations of forensic science with the analysis and interpretation of verifiable data, efforts to identify and avoid bias, and clear connection to and building on peer reviewed research will benefit the profession as a whole.

The Center for the Future of Forensic Science at BGSU offers unparalleled experiential learning to forensic science students and a gateway to advanced training and cutting edge forensic science research for practicing forensic scientists, forensic science technicians, crime scene investigators, and other law enforcement professionals.

## 1.3 Uniqueness

- Unique partnership with Ohio BCI on-campus crime lab and investigation facility
- Crime houses provide the ability to demonstrate real world crime scenes on campus
- Opportunities to learn from both faculty and accomplished forensic and CSI professionals in solving authentic crime scenarios
- Students learn the current knowledge and skills coveted by employers across the country and around the world

## 1.4 Program Goals and Objectives

The goal of the forensic science academic programs at BGSU is to maximize the Ohio BCI relationship to provide students the precise education and training crime laboratories seek. Producing highly qualified forensic scientist position candidates equipped with the correct academic foundation and current technological skills.

Program objectives include continuous direct consultation with professional forensic scientists and crime laboratory managers to ensure curricula aligns with current laboratory practices.

Evidence handling and analysis protocols; documentation strategies; instrumentation, equipment and supply provision; as well as professional ethics, quality assurance, applicable law and testimony instruction are all intended to accurately reflect professional practice. The ongoing professional relationship will inform timely academic adjustment, as necessary.

BGSU forensic science programs recognize the Forensic Science Education Programs Accreditation Commission (FEPAC) Standards as its academic foundation. The programs intend to achieve continual FEPAC accreditation recognition as a mechanism to ensure top quality forensic science programming is maintained, and students and employers recognize a FEPAC compliant education is achieved.

### **1.5 Mission Statement**

As the teacher/scholars of forensic science education, we are committed to:

- Nurturing leaders in the forensic sciences;
- Developing professionals who contribute to the greater good of society by protecting the public and ensuring justice;
- Advancing the profession and practice of the forensic sciences through education and cutting-edge research.

### **1.6 Vision Statement**

Through an innovative collaboration, we develop leaders who revolutionize the profession of forensic science.

### **1.7 BGSU Vision, Mission and Core Values**

The Forensic Science Program further comports with the overall Mission, Vision and Core Values as expressed by Bowling Green State University (BGSU):

“Bowling Green State University provides holistic and comprehensive educational experiences that enhance the lives of our students, stakeholders, and the many publics we serve. Our graduates are prepared for lifelong personal and career growth and for engaged citizenship and leadership in a global society. Through our excellence in teaching, research, and outreach, BGSU builds a collaborative, diverse, and inclusive community where creative ideas, new knowledge, and entrepreneurial achievements can benefit others in our region, the state of Ohio, the nation, and the world.”

<https://www.bgsu.edu/forward.html#vision>

### **1.8 Institutional Accreditation**

BGSU is accredited by the Higher Learning Commission (HLC). The HLC is an institutional accrediting agency recognized by the U.S. Department of Education. BGSU has been

continuously HLC accredited since 01/01/1916. Additional detail and accreditation verification information may be viewed at [HLC Accreditation \(bgsu.edu\)](https://www.bgsu.edu/academic-affairs/hlc).

### 1.9 Current Employment Market

The rising level of demand for forensic science professionals has been correlated with the rising level of technological solution prominence across nearly all industries. Forensic information will be far more accessible and actionable with the assistance of cutting edge technological developments, making those who specialize in collecting said information more valuable to their employing organizations by default. Experts have postulated that the source of the higher demand for forensic science professionals could be related to a higher overall level of public awareness about the importance of forensic science itself. Thanks in part to a higher degree of media coverage, there are now more expectations for forensic investigators to contribute their skills for clarity and closure in criminal investigations. While the forensic science field is slated to see many more employers expressing an interest in those who specialize in it, the steep requirement for expertise will demand a higher level of effort from prospective forensic science specialists to distinguish themselves from the competition. The higher level of interest in forensic science that employers will have means that potential applicants will likely be screened with more scrutiny going forward. Going forward, forensic science experts may have a greater need to demonstrate independent proficiency in technological solutions to supplement their contributions to their respective fields.

The Bureau of Labor Statistics (BLS) estimates that the median pay for Forensic Science Technicians was \$60,590/year (\$29.13/hour) in 2020. The projected percent change in employment from 2019 to 2029 is 14%, which is much faster than average – the average growth rate for all occupations is 4%. This means that over the same time period, the projected number of forensic technician jobs increase by 2,400, though this rising demand will accompany rising competition as well. (May 17, 2021: <https://www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm>)

As suggested in job openings found on the American Academy of Forensic Sciences (AAFS) website (<https://webdata.aafs.org/public/jobs/postings.aspx>), the skills required for these positions include:

“Solid understanding of data; excellent analytical and problem solving skills; knowledge of basic statistical methods and procedures; quantitative and analytical skills; ability to think critically/analytically; expertise to acquire, manage, manipulate, and analyze data and report results; identifies, analyzes, and interprets trends or patterns in complex data sets; performs basic statistical analyses for projects and reports, develops graphs, reports and presentations for specific results; monitor, verify, and audit compliance of data with standards; strong presentation skills; strong analytical and logical reasoning skills; strong level of detail, problem solving and organizational skills; knowledge of laboratory techniques used for scientific

examination of physical evidence; requires ability to maintain and establish satisfactory working relationships with coworkers, various law enforcement personnel, and legal system personnel; requires ability to communicate ideas effectively in oral and written form; requires ability to construct court exhibits and demonstration charts; requires ability to analyze and correlate data contained in reports of crime; requires ability to develop evidence and to present it convincingly in written reports or orally; requires ability to compare, analyze, and/or identify physical materials and other matters; *requires ability to pass an agency background investigation.*”

The curriculum of the BSFS program at BGSU is designed to graduate forensic scientists with the types of skills required to be successful as a professional in this field.

### **1.10 Background Checks**

The BGSU Forensic Science Program recognizes the importance of emphasizing the elevated personal integrity requirements particular to employment in the field of forensic science both early and often. Specifically, all students are advised that background checks similar to those required by law enforcement are likely to be a condition of employment.

Anyone considering a career in the forensic sciences must be aware that employment applications typically go well beyond normal job requirements for transcripts, employment history, references, interview and basic criminal-record checks.

Though varying by agency or employer, expect applicant background checks to extend to inquiries about use of alcohol and illegal drugs, family and social companions, financial history, police records, and civil court actions. In addition, personal information posted on the internet, including social media websites, may be subject to review. Candidates should expect to take drug, personality, and polygraph tests prior to employment. As an employee, you may be subject to continued drug testing.

The above is true for permanent employment as well as internships. Students must consider all factors that could influence future employment.

## 2 ADMISSIONS

BGSU Forensic Science is committed to recruiting students who demonstrate both a passion for the study and future practice of forensic science, as well as the intellectual capability to navigate an exceptionally rigorous academic curriculum. The Program Director controls BSFS admission, maximizing opportunity for individual student success. Less than half of all program applicants are accepted. [Student Measures and Performance](#) provides essential measures demonstrating incoming student quality, continued academic performance, program retention and graduation rates that inform ongoing recruiting strategies.

Individual student success is the ultimate goal of the BSFS program. Student achievement is evident in the forensic science research conducted as part of the program capstone experience. Examples of recent student research are also included on the [Student Measures and Performance](#) page.

The BSFS program specifies standardized college admission test score requirements above those of BGSU. Students accepted by the university must further apply for enrollment in the BSFS degree program and demonstrate the following:

### Incoming Students

- **SAT** – Combined SAT score of 1200 or higher, with at least a 550 score on the Math section; **OR**
- **ACT** – An ACT composite and math score of 25 or higher

\*\* Students with scores falling below these ranges may be reviewed for acceptance on an individual basis. \*\*

### Current BGSU students and Transfer Students may be eligible for the program if they have:

- Obtained a cumulative college GPA of a 3.0 or better **and**
- Earned a “C” or better in CHEM 1230 or CHEM 1350 **and**
- Earned a “C” or better in subsequent chemistry courses, including: CHEM 1270 (or CHEM 1370), CHEM 3410, **and** CHEM 3440.

The BGSU Forensic Science programs employ policies and procedures for student recruitment and admissions that seek to locate and select highly qualified individuals who have the educational prerequisites and the interest and motivation to pursue careers in forensic science. Our program is competitive and fewer than 40% of applicants are offered admission to the program. The 2021 incoming BSFS Freshman class average a high school GPA of 4.01 on a weighted scale.

### 3 DECLARING A MINOR

BGSU requires you to have a major *and* a minor (or a dual or second major) declared in order to graduate.

In the Forensic Science Program, BSFS students will take all of the classes that are needed to have a Chemistry minor. However, *every student still needs to fill out the paperwork* to tell the College that they have declared Chemistry as their minor, *the program office cannot do this, and it is not automatic.*

If BSFS students wish to declare a minor other than Chemistry, that is allowed; however, students should recognize that declaring a different minor does *not* mean that any of the Chemistry courses are waived. All courses listed under the “Additional Requirements” section of a student’s checksheet, which constitute a Chemistry minor, are required for all BSFS majors.

To declare the minor,

- Find the form at the following location: <https://www.bgsu.edu/arts-and-sciences/student-resources.html>.
  - The link for the form will be located in the brown box on the right, under Student Forms, you want the one called “Change in Major or Minor”.
  - “Change in Major or Minor” form: <https://www.bgsu.edu/content/dam/BGSU/college-of-arts-and-sciences/documents/Student-Forms/ChangeMajorMinorFillableSept2020.pdf>
- Download this form and fill it out. If only adding a minor, write “no change” under new major, and write “Chemistry” (or the desired minor) under new minor.

**Change in Major or Minor** COLLEGE OF Arts and Sciences  
BGSU | BOWLING GREEN STATE UNIVERSITY

Note: Changes to your current major and/or minor may result in a delay of your graduation timeline.

Name \_\_\_\_\_ Student ID Number \_\_\_\_\_

Phone (Local or Cell) \_\_\_\_\_ Email \_\_\_\_\_

Present Major (1) Forensic Science New Major (1) or "No Change" No Change

(2) \_\_\_\_\_ (2) \_\_\_\_\_

Present Minor (1) \_\_\_\_\_ New Minor (1) or "No Change" Chemistry

(2) \_\_\_\_\_ (2) \_\_\_\_\_

Degree Sought:  Bachelor of Arts  Bachelor of Arts in Communication  Bachelor of Science  
 Bachelor of Fine Arts  Bachelor of Liberal Studies  Bachelor of Science in Journalism

Expected Graduation Term/Year (Circle Term) \_\_\_\_\_ Spring / Summer / Fall of \_\_\_\_\_

Signature \_\_\_\_\_ Date: \_\_\_\_\_  
Submit to: Administration Bldg, Rm 205 // Bowling Green, Ohio 43403-0133 // Phone: (419) 372-2015 // Email: contactcas@bgsu.edu

Office Use Only Processed by: \_\_\_\_\_ Date: \_\_\_\_\_ Program/Plan \_\_\_\_\_ Advisor \_\_\_\_\_

- Send this form (not a picture of the form) to the College of Arts and Sciences ([contactcas@bgsu.edu](mailto:contactcas@bgsu.edu)). If the form is sent from a BGSU email, it does not need to be signed.

## 4 ACCELERATED BACHELOR'S TO MASTER'S PROGRAM

The Graduate College at Bowling Green State University has several graduate programs that permit qualified undergraduate students who are earning their bachelor's degree at BGSU to apply to an *Accelerated Bachelor's to Master's program*. Participating in an Accelerated Bachelor's to Master's program provides students with the opportunity to complete both a bachelor's degree and a master's degree in an efficient manner.

Undergraduate students who apply to and have been accepted into an Accelerated Bachelor's to Master's program will be coded as *Undergraduate Accelerated Students* until they have completed their Bachelor's degree. While an *Undergraduate Accelerated Student*, they may take **up to nine (9) credit hours** of graduate credit. A maximum of nine (9) graduate credit hours may be overlapped between both the bachelor's and the master's degrees. These overlapped credits can count toward both the undergraduate and graduate degrees (according to the curriculum of each program).

See the Graduate College's Accelerated Bachelor's to Master's Program Policy for more detailed information on admissions requirements, student status, credit hour policies, tuition, financial aid, program withdrawal, and program dismissal. *Please note:* These policies pertain to students who wish to officially work toward both a bachelor's degree and master's degree at BGSU simultaneously. Students who wish to take graduate level courses during their senior year but not officially enroll in a Master's degree program may apply to do so by earning Advanced Undergraduate Status (AUS).

### Accelerated MSFS Admissions Requirements

Students interested in pursuing the Accelerated Bachelor of Science in Forensic Science (BSFS) to Master of Science in Forensic Science (MSFS) must complete the following application requirements:

1. By the start of Accelerated status, they must have either:
  - 75 credit hours earned and an overall BGSU GPA of at least 3.2, or
  - 90 credit hours earned and an overall BGSU GPA of at least 3.0;
2. A completed Accelerated Bachelor's to Master's Program Application;
  - Deadline to complete application: **March 1st 11:59 pm** to take accelerated courses the following Fall semester
3. Official transcripts from all universities attended;
4. ***At least one letter of recommendation*** from a full-time BGSU faculty member, preferably from graduate faculty within the student's major or targeted graduate program.

- *Note:* The letter of recommendation should come from a faculty or staff member of BGSU with personal knowledge of student who is not a faculty/staff from the forensic science program.

5. **Personal Statement** that addresses these topics: research background and interest, career goals, and how admittance to the MSFS program at BGSU can aid in obtaining these goals.

Please note, to be eligible for the Accelerated Bachelor's to Master's Program in Forensic Science, students must NOT have taken or previously received credit in as part of the BSFS program:

- CRJU 4510
- CRJU 4400
- FSCI 4300 (if forensic chemistry specialization student) **OR**
- FSCI 4230 (if forensic biology or forensic examination student)

#### **Accelerated BSFS to MSFS Program Plan**

Students enrolled in the Accelerated BSFS to MSFS should follow the following course schedule for planning out graduate work that begins while still enrolled as an undergraduate student, followed by the courses taken when fully enrolled as a graduate student in the MSFS program. This program requires you to complete a Plan I Thesis Research Project (FSCI 6990) or a Plan II Directed Research Project (FSCI 6910).

#### **Undergraduate Accelerated Status** (*limited to 9 credits maximum*)

Courses that ***must*** be taken while an undergraduate student with Undergraduate Accelerated Status that will overlap between the Bachelor's and Master's degrees:

- CRJU 6510 OR FSCI 6820 (Ethics in Forensic Science)
- FORI 5400
- One of the following, based on undergraduate BSFS specialization
  - FSCI 5300 (if forensic chemistry specialization student) **OR**
  - FSCI 5230 (if forensic biology or forensic examination student)

#### **Graduate Accelerated Status**

Courses to be taken once the bachelor's degree has been completed and the student is fully enrolled as a graduate student in the MSFS master's program should include any courses not taken in the "**Curriculum**" section of this handbook while the student was on Undergraduate Accelerated Status. Students are expected to participate in graduate education and research throughout the year, including summer. Generally, master's degree completion is expected to take an additional 3 semesters, including summer, post-graduation from undergrad.

## 5 PROGRAM SUPPORT

### 5.1 Photo ID/BG1 Card

The BG1 Card is the official identification card for BGSU students, faculty and staff. Your BG1 Card is more than just an ID card. It provides access to meal plans, events, and campus facilities. Also, if you are a PNC Bank customer, it can be linked to your bank account to serve as an ATM card. Lastly by adding funds to your BG1 Bucks account, your card can then be used for printing, on-campus vending, and at multiple off campus locations.

Student must be registered for at least one course to be issued a student identification card. Taking a photo at BG1 Plus is simple. Just swing by the information desk in the student union. You will need to have your government issued ID with you. There is a \$25 fee for the BG1 Card. It will be billed to the student's Bursar account and this is not covered by any fee waivers from assistantships.

### 5.2 SOAR

BGSU calls new student orientation, **SOAR** – which stands for **S**tudent **O**rientation, **A**dvising and **R**egistration. At SOAR, you will have an opportunity to connect with current students, as well as staff members, and get to know some of your new fellow Falcons. You will be connected with an Orientation Leader who will lead you through your SOAR experience and continue to be a resource throughout the summer and Fall Welcome. You will also be able to take care of some important “to-do” list items such as finalizing your financial aid and billing, getting your BG1 card, and finalizing your fall semester class schedule. We will also provide opportunities for campus tour and residence hall tours. Every step of the way, we encourage you to ask questions – we're here for you! For more information and scheduling, visit the SOAR webpage at <https://www.bgsu.edu/new-student/soar.html>

### 5.3 Fall Welcome

Fall Welcome is a collection of events, programs and resources put in place to welcome first-year and transfer students to the Falcon family and get familiar with campus before classes begin! Participating in as many of these events as possible will help set you up for success before classes begin. Specifically, ALL new and transfer students need to attend **Convocation** and **Get with the Program**. At “Get with the Program” incoming students get to meet other first-year students and faculty in their department and major. Students will hear first-hand from their program faculty about what it takes to be successful, as well as expectations, guidelines and resources that will be helpful to you throughout their BGSU experience. For more information and scheduling, visit the Fall Welcome webpage at <https://www.bgsu.edu/fallwelcome#events>

### 5.4 MyBGSU

MyBGSU is a secure Intranet – Enterprise Portal environment that helps to enhance campus communications and integrate multiple administrative systems into one centralized

environment. All applications and communications take place in a secure environment, accessible by authorized audiences only. With only one sign-on, students, faculty and staff are able to access e-mail, Canvas, PeopleSoft HCM, Registration Services, Financial Services, Meeting Maker, etc.

Features and benefits of the enterprise portal include:

- Unified access to multiple systems, which streamlines processes across organizational boundaries by providing unprecedented access to information interrelating multiple systems and databases.
- Personalization, which provides a Web-based experience tailored by role and job function. Single access point, which gives access to virtually all authorized systems and collaboration tools with one password.
- Advance search and navigation capacity, which streamlines navigation of multiple databases.
- Accessibility, from anywhere at any time via Internet and Web browsers.

Log on to MyBGSU by going to [www.bgsu.edu](http://www.bgsu.edu) and clicking on the MyBGSU icon. Then enter your BGSU user name and password.

## 5.5 DARS

Each semester, students should review their Degree Audit or DARS report through “MyBGSU”. The report is a computer-generated document that checks your various graduation requirements. DARS reviews all BG Perspective, college and university-wide requirements. To access the report follow these simple steps:

1. Log on to your “**MyBGSU**” from the BGSU homepage, click on “Degree Audit” under Quick Links at the top right of the screen.
2. Click “Run Audit” located at the bottom of the page.
3. On the “Completed Audit Requests” page, select the most recent audit and click “view audit”.
4. If you have not declared a major, or wish to see how your credits will apply to a different major, use the “Run Selected Program” feature. Select the program you desire in the center drop-down list, choose the most current semester, and then click on “Run Audit.”
5. Open the audit, navigate through individual sections by clicking on the icon to the left of each requirement or click on “Open All Sections” to open the entire audit. Color notes: purple dots indicate “In Progress;” red X indicates “Incomplete;” green check indicates “Completion.”

6. Click on “Course History” to see a list of all your courses and a historical display of your GPA.
7. Review your audit and utilize it to plan your schedule for each term. Discrepancies should be reported/discussed with your advisor. If you have questions or concerns or need assistance accessing your DARS, contact the College of Arts and Sciences Office at 419-372-2015.

## 5.6 Advising

During your time at BGSU, you may work with an academic advisor in the Arts and Sciences College office to ensure you have the appropriate coursework and advising. Please visit their website to find your advisor: [Student Services Staff \(bgsu.edu\)](https://www.bgsu.edu/student-services-staff). In addition, faculty mentors within the BSFS program can provide support. For Forensic Biology specializations, Dr. Oechsle is assigned, and those students who are within Forensic Chemistry or Forensic Examination, Dr. Worst is assigned as faculty mentor.

## 5.7 Forensic Science Learning Community

Given the inherent academic challenges presented by the BSFS major, BGSU Forensic Science offers added support and program engagement for undergraduate students through the Forensic Science Residential Learning Community (FSRLC). The FSRLC is designed to help forensic science students live, learn and succeed together. The community is designed to offer students a targeted support network to improve classroom learning and academic success, as well as provide unique opportunities beyond the classroom to investigate the real world of forensic science. It provides experiential forensic science learning and networking opportunities designed to augment the classroom experience.

The Forensic Science Residential Learning Community is for any student enrolled in the BGSU Bachelor of Science in Forensic Science degree program, or seeking a pathway to enrollment through either the Biology or Chemistry Department forensic science specializations. This community is not intended for criminal justice majors.

For more information and how to apply, visit <https://www.bgsu.edu/learning-and-theme-communities/forensic-science.html>

## 5.8 Delta Delta Epsilon

Delta Delta Epsilon, the international forensic science honor society, was founded in 2010 by the Forensic Science Institute at the University of Central Oklahoma. Delta Delta Epsilon (DDE) is dedicated to stimulating academic achievement, promoting community understanding, and advancing the fields of forensic science. Colleges and universities which grant baccalaureate or advanced degrees in one or more forensic science disciplines that support the DDE mission may establish chapters with the Society. In 2019-2020, Bowling Green State University was approved to start the Alpha Pi Chapter. Membership is limited to students within the disciplines of forensic science which meet high academic criteria

and have displayed excellence during their collegiate career. As established by the national organization, students are eligible for membership into this society if they are majoring in forensic science and have maintained an undergraduate GPA of 3.5 or higher, or are in the graduate forensic science program, having maintained a graduate GPA of 3.5 or higher. DDE is intended as an academic honor society; however, community service has become an integral component of our programs. For more information on joining the organization, visit:

<https://www.bgsu.edu/forensic-science/BGSU-Delta-Delta-Epsilon.html>

DDE at the Center for the Future of Forensic Science at BGSU also maintains a list of forensic science job resources at: [https://www.bgsu.edu/forensic-science/BGSU-Delta-Delta-Epsilon/Forensic-Science\\_Jobs.html](https://www.bgsu.edu/forensic-science/BGSU-Delta-Delta-Epsilon/Forensic-Science_Jobs.html)

## 5.9 Professional Involvement

The BGSU Forensic Science degree programs provide service to the forensic science profession and to the community through a combination of communication, collaboration, consultation, technical assistance and continuing education programs that facilitate sharing the program's professional knowledge and competence. The purpose of this involvement is to provide opportunities for faculty and students to contribute to the advancement of the field of forensic science and to ensure the academic programming offers current technologies/methods and credible with practitioners and forensic science laboratory administrators.

### Interaction with Forensic Science Laboratories

The BGSU-AGO partnership agreement creates a unique, dynamic capacity for seamless interaction between the University and the AGO's Ohio BCI. It is instructive to know, BGSU Forensic Science degree programs were developed in consultation with Ohio BCI forensic scientists; and both current and former Ohio BCI staff routinely provide degree specific course instruction. The on-campus BCI facility allows faculty and students regular controlled access to a professional forensic science laboratory.

Formal interaction with Forensic Science is demonstrated through multiple mechanisms, including:

- Student internships;
- Training opportunities in which the program provides instruction to laboratory personnel;
- Faculty serving on laboratory advisory committees;
- Coordinated research initiatives between the laboratory and academic program;
- Professional activities coordinated between the laboratory and the academic program; and
- Laboratory personnel serving as adjunct faculty; guest instructors; and in an advisory capacity to the academic program.

Documentation of formal interactive activities is maintained in accordance with FEPC retention requirements.

### Interaction with Forensic Science Organizations

BGSU Forensic Science recognizes on-going interaction with forensic science organizations offers a mechanism to ensure program instruction remains current with emerging professional technologies and methods; introduces BGSU students to professional practice and prospective future employers; and creates opportunity to help advance the profession.

Interactive activities include:

- Faculty membership and regular conference participation in numerous professional forensic science organizations (e.g. American Academy of Forensic Science; American Society of Crime Laboratory Directors; Association of Forensic Quality Assurance Managers; Midwestern Association of Forensic Scientists; Forensic Science Institute of Ohio);
- Student membership in professional forensic science organization;
- Student attendance/participation in forensic science conferences; and
- Hosting training and meetings with external professional organizations.

### 5.10 Student Support Services

BGSU offers all the student support services expected of a major university, including learning commons; technology support; career center; financial aid; health and counseling; peer mentoring; legal aid; student employment; study abroad; undergraduate research; accessibility services; LGBTQ resources; non-traditional student support and more. Links to many of the services provided through:

- The Office of the Dean of Students: <https://www.bgsu.edu/dean-of-students.html>
- Student Support Services: <https://www.bgsu.edu/trio-programs/student-support-services.html>
- The Division of Diversity and Belonging: <https://www.bgsu.edu/equity-diversity-and-inclusion/lgbt-resource-center/helpful-information-and-resources.html>
- Student Legal Services: <https://www.bgsu.edu/student-legal-services.html>

### 5.11 Accessibility Services

Accessibility Services is to help provide equal access and reasonable accommodations to students with disabilities attending BGSU. Students wishing to discuss their eligibility for such accommodations are encouraged to contact the office at 419/372-8495, 38 College Park Office Building, or on the web at <https://www.bgsu.edu/accessibility-services.html>.

## 5.12 BGSU Libraries (Jerome Library) & The Learning Commons

Many of the resources available through the Jerome Library are easily accessible online. These resources include but are not limited to an extensive database of journals and periodicals, local and national newspapers, books and government documents.

The main page for the BGSU library, which includes mobile access, is located at <http://www.bgsu.edu/library.html>. If you need research assistance, visit the Ask Us! webpage at <http://www.bgsu.edu/library/ask-us.html> to contact us by IM, text, email, or phone. You can also book a 1-hour research consultation with a librarian at <https://bgsu.libcal.com/appointments/ira>.

The Learning Commons provides free tutoring services to all BGSU students and is located on the 1st floor of Jerome Library. You can find some information at <https://www.bgsu.edu/learning-commons.html>. If you need online help with the writing process, visit <https://www.bgsu.edu/learning-commons/writing.html>.

## 5.13 OhioLINK

OhioLINK is a statewide library and information network linking universities, colleges, technical and community colleges, and the State Library of Ohio.

Some of your classes will require moderate to extensive library research. As a registered student you can make use of BGSU's Jerome Library as well as the resources of over 82 academic libraries across the state of Ohio. The following information provides a brief introduction to these resources as well as helpful websites that can further answer your questions.

The main features of OhioLINK include:

- An online central catalog of the holdings of member libraries
- Online access to research and reference databases
- A document delivery service for books, periodical articles, and other materials.
- User-initiated online borrowing

OhioLINK is a library information system provided for the faculty, students and staff of OhioLINK participating institutions. The system contains menus with instructions on how to use the resources presented. Patrons are authorized to make selections and follow keystroke instructions as provided by on-screen displays.

Any attempts to leave the menus through keystrokes not suggested by the system may be interpreted as unauthorized use of the system. Unauthorized use of OhioLINK is prohibited and will be considered to be in violation of OhioLINK's rules and policies for use of its computers and network.

OhioLINK's home page is <http://www.ohiolink.edu/>.

## 5.14 Writing Center

The Writing Center staff is committed to the success of campus and community writers throughout various stages of their writing projects, with primary emphasis on the development of student writers. The staff envisions their service as one of writers helping writers. In providing a real audience for writers, they ask writers questions to encourage them to revise their drafts for increased clarity of ideas, logical organization, and overall effectiveness. Rather than serving as a proofreading or editing service, the lab staff works with writers to help them learn to edit their own work. Because they believe ideas have consequences, they work with writers to bring their ideas into focus. The lab encourages creativity, critical thinking, and communication as a means toward building stronger communities. They look at writing not only as a static text but also as a process of learning and problem solving in order to create new meaning and greater understanding.

The Writing Center strives to create a unique space, where writers feel comfortable to discuss and develop their ideas and where they can grow confident in their ability to communicate with diverse readers.

To Schedule a Writing Appointment:

- Call the Learning Commons at 419-372-2823
- Visit the Learning Commons on the first floor of Jerome Library

Writers Lab URL: <https://www.bgsu.edu/learning-commons/writing.html>

## 5.15 Technology Support

**Technology Support Center (TSC)** Provides a central point of contact for faculty, staff and students for questions, problem reports, service requests and inquiries for University computer systems and communications technologies at BGSU. Students can get help by phone (419-372-0999) or by visiting their web page at <https://www.bgsu.edu/its/students/tech-support.html>.

**Student Technology Assistance Center (STAC)** Students looking for CANVAS support or more in-depth assistance with computer technology for a class project should contact STAC. Students can get help in person at 122 Jerome Library (1st floor), by phone (419-372-9277) or visiting their web page at <https://www.bgsu.edu/library/stac.html>.

**Tutors:** STAC is open to walk-in traffic and by-appointment tutoring sessions with staff. Think of this area as the computer equivalent of the Writers Lab.

**Tutorials:** The web site houses nearly two dozen tutorials on BGSU core technologies, as well as general hardware and software tutorials on a variety of useful subjects. When the center is not open, the site still is.

**Workshops:** STAC also offers technology workshops for courses, student-run organizations, or organizations that primarily serve students. These workshops deal with

topics related to core BGSU technologies, including using BGSU Webmail, antiviral software, and general campus technologies.

### **5.16 Computer Resources**

The University provides students, faculty, and staff with access to 13 laboratories equipped with PC and Apple computers. There are four computer laboratories located in the College of Business Administration. The entire campus has wireless networking accessibility.

### **5.17 Career Planning and Placement Services**

Career Services provides comprehensive career planning and placement services for students and alumni of the University. The professional staff helps students clarify and implement their career goals. Services offered include: a Career and Life Planning course offered each semester; individual counseling appointments; personality and occupational interest inventories; SIGI+ an interactive computer career guidance and information system; classroom presentations on all phases of the career decision-making recruiters; career days and job fairs; job listings and resume referrals; credential services; the Falcon Career Connection, and alumni placement services.

Worknet, a web-based system powered by eRecruiting was adopted by the Career Services as a way to capture student and alumni resumes using the internet. It connects you with employers, co-ops, internships, and jobs at the click of a mouse. By using Worknet students can provide information for the referral system that lets potential employers know the students and their qualifications. In addition, Worknet gives students access to schedule on-campus interviews and view job listings of full-time, internship, summer, and part-time positions. Instructions explain this process can be found in the Career Services office.

Any student who needs assistance clarifying their academic interests or related career options is encouraged to schedule a counseling appointment or participate in a career exploration group or course. It is recommended that students attend career search programs and job fairs, register for resume referral and campus interviewing, and utilize placement-counseling services.

Stop by our office in the Bowen-Thompson Student Union on the second floor, or check us out on the web: <https://www.bgsu.edu/career-center.html>

## 6 LEARNING OUTCOMES: BACHELOR OF SCIENCE IN FORENSIC SCIENCE

### BGSU Forensic Science Practice Foundations

Forensic Scientists are vital members of the criminal justice system and are able to:

- Critically think and analyze complex data for the benefit of the criminal justice system
- Apply diverse information to solve a real problem
- Provide laboratory skills to exacting standards and precision of care to solving crimes

### BGSU Forensic Science General Ability Based Outcomes

1. **Conceptual Competence**: The BGSU forensic scientists shall understand the foundations of the profession of forensic science and its position in criminal justice.
2. **Scientific Competence**: The BGSU forensic scientists shall comprehend the scientific method and its use in scientific discoveries and crime investigation.
3. **Mathematical Competence**: The BGSU forensic scientists shall use mathematical variables to analyze physical, chemical, biological evidence.
4. **Communication Competence**: The BGSU forensic scientists shall appropriately inform, educate and motivate using a variety of methods and media with clarity, sensitivity, and accuracy.
5. **Critical thinking and decision making abilities**: The BGSU forensic scientists shall acquire, evaluate, synthesize and apply information, knowledge and processes relevant to the solution of an identified problem and make sound decisions.
6. **Social Awareness**: The BGSU forensic scientists shall demonstrate the ability to place forensic evidence and professional issues within appropriate historical, cultural, social, economic, scientific, political and philosophical frameworks, and demonstrate sensitivity and tolerance within a culturally diverse society.
7. **Professional Conduct and Demeanor**: The BGSU forensic scientists shall act ethically and responsibly, with integrity, compassion, empathy, and respect. The BGSU forensic scientists shall accurately self-assess behaviors and conduct, and seek, accept and apply constructive feedback.

8. ***Leadership, Innovation and Advocacy***: The BGSU forensic scientists shall initiate or contribute to positive change on behalf of society and the profession.

## BGSU Forensic Science Professional Ability Based Outcomes

### I. Forensic Chemistry

- BGSU forensic chemists shall demonstrate the ability to apply their formal education and training to genuine crime laboratory casework.
- BGSU forensic chemists shall possess the requisite knowledge and experience to operate all scientific instrumentation typically used by crime laboratories to identify controlled substances.
- BGSU forensic chemists shall understand the full analytical process necessary to identify controlled substances for criminal proceedings.
- BGSU forensic chemists shall demonstrate the ability to record accurate and complete examination documentation; as well as the ability to use that examination documentation to prepare a laboratory report summarizing their findings.
- BGSU forensic chemists will demonstrate a strong foundation of applied scientific and ethical education sufficient to ensure their ability to evaluate suspected controlled substances objectively and without bias.

### II. Forensic Biology

- BGSU forensic biologists shall demonstrate learned critical thinking and decision making capabilities based on available case facts when analyzing evidence.
- BGSU forensic biologists shall demonstrate laboratory competence garnered through required university coursework in forensic science, biology and chemistry.
- BGSU forensic biologists will exemplify strong communication skills, as necessary to effectively perform as a productive member in a team based analysis approach.
- BGSU forensic biologists will demonstrate the ability to complete necessary tasks in a time efficient manner.
- BGSU forensic biologists will have substantively satisfied the FBI coursework requirement for DNA analysts.

### **III. Forensic Examination**

- BGSU forensic examiners will demonstrate comprehension of fundamental crime scene investigation techniques.
- BGSU forensic examiners shall demonstrate the ability to perform assorted latent print processing and capture techniques.
- BGSU forensic examiners shall understand microscopic theory and the ability to use a variety of microscope types in the examination of forensic evidence.
- BGSU forensic examiners shall possess the requisite knowledge and experience to operate all scientific instrumentation typically used by crime laboratories in the analysis of trace, pattern and impression evidence.
- BGSU forensic examiners shall fully comprehend the scientific foundations of the comparative forensic sciences, such that they are capable of answering legal challenges.

## 7 CURRICULA

### Fall 2020 Bachelor of Science in Forensic Science Specialization in Forensic Biology



#### BG Perspective (BGP) Requirements

Must complete at least 1 course in each of the following:

English Composition and Oral Communication  
Course \_\_\_\_\_ Credits \_\_\_\_\_

Quantitative Literacy  
\_\_\_\_\_

Must Complete at least 2 courses in each of the following:

Humanities and the Arts  
\_\_\_\_\_  
\_\_\_\_\_

Natural Sciences  
\_\_\_\_\_  
\_\_\_\_\_

Social and Behavioral Sciences  
\_\_\_\_\_  
\_\_\_\_\_

Complete total required BGP credit hours by selecting courses from any of the above categories:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**University Requirements** Designated courses in Humanities and the Arts and the Social and Behavioral Sciences domains may be used to fulfill both the BGP requirement and one of the following university requirements:

Cultural Diversity in the US \_\_\_\_\_  
International Perspective \_\_\_\_\_

**Composition Requirement:**

GSW 1120 Academic Writing \_\_\_\_\_

Total BGP Credits: Must be at least 36 \_\_\_\_\_

#### Arts & Sciences Requirements

Foreign Language (\_\_\_\_yrs of HS \_\_\_\_\_)

\_\_\_\_\_ 1010 \_\_\_\_\_  
\_\_\_\_\_ 1020 \_\_\_\_\_  
\_\_\_\_\_ 2010 \_\_\_\_\_  
\_\_\_\_\_ 2020/2120 \_\_\_\_\_

Lab Science  
\_\_\_\_\_  
\_\_\_\_\_

Quantitative Literacy

\_\_\_\_\_ EITHER MATH 1310 OR MATH 1340 & MATH 1350

**Multidisciplinary Component** Select from approved offerings, in consultation with an advisor and a faculty mentor. Four courses total, each with a different subject prefix. At least two courses at 3000/4000 level. Multidisciplinary component courses may not fulfill major, minor, or BGP requirements.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### FSCI Major Core Requirements (38 Hrs.)

Hrs	Grade	
4	_____	BIOL 2040 Concepts in Biology I
4	_____	BIOL 2050 Concepts in Biology II
4	_____	BIOL 3310 Human Anatomy and Physiology I
4	_____	BIOL 3320 Human Anatomy and Physiology II
3	_____	CHEM 1770 Intro to Forensic Science
3	_____	CRJU 4400 Law, Evidence, and Procedure in Forensic Science
3	_____	CRJU 4510 Criminal Justice Ethics
3	_____	MATH 2470 Fund. Of Statistics
5	_____	PHYS 2010 or 2110 University Physics I
5	_____	PHYS 2020 or 2120 University Physics II

#### FSCI Forensic Biology Specialization Requirements (16 Hrs.)

Hrs	Grade	
4	_____	BIOL 3500 Genetics
3	_____	BIOL 4080 Molecular Biology
3	_____	BIOL 4230 OR FSCI 4230 Forensic Biology
3	_____	BIOL 4240 OR FSCI 4240 Forensic DNA Analysis
3	_____	FSCI 4890 Internship OR FSCI 4990 Capstone

#### Additional Specific Discipline Requirements (25-26 hours)

These courses also fulfill the requirements for a minor in chemistry. Consult with an advisor about declaring the minor.

4	_____	CHEM 1230 General Chemistry I and
1	_____	CHEM 1240 General Chemistry I Lab OR
5	_____	CHEM 1350 General Chemistry
4	_____	CHEM 1270 or 1370 General Chemistry
1	_____	CHEM 1280 or 1380 General Chemistry Lab
3	_____	CHEM 2010 Quantitative Chemical Analysis
3	_____	CHEM 3080 Basic Biochemistry OR
5	_____	CHEM 4450 Biochemistry
3	_____	CHEM 3410 Organic Chemistry
3	_____	CHEM 3440 Organic Chemistry
1-2	_____	CHEM 3450 Organic Chemistry Lab OR
	_____	CHEM 3460 Organic Chemistry Lab

All core, specialization, and additional requirement courses must be taken for a letter grade and passed with a grade of C or better.

Fall 2020  
 Bachelor of Science in Forensic Science  
 Specialization in Forensic Chemistry



**BG Perspective (BGP) Requirements**

Must complete at least 1 course in each of the following:

English Composition and Oral Communication	
Course	Credits
_____	_____
Quantitative Literacy	
_____	_____

Must Complete at least 2 courses in each of the following:

Humanities and the Arts	
_____	_____
_____	_____
Natural Sciences	
_____	_____
_____	_____
Social and Behavioral Sciences	
_____	_____
_____	_____

Complete total required BGP credit hours by selecting courses from any of the above categories:

_____	_____
_____	_____
_____	_____

**University Requirements** Designated courses in Humanities and the Arts and the Social and Behavioral Sciences domains may be used to fulfill both the BGP requirement and one of the following university requirements:

Cultural Diversity in the US	_____
International Perspective	_____

**Composition Requirement:**  
 \_\_\_\_\_ GSW 1120 Academic Writing \_\_\_\_\_

Total BGP Credits: Must be at least 36 \_\_\_\_\_

**Arts & Sciences Requirements**

Foreign Language (\_\_\_\_ yrs of HS \_\_\_\_\_)

_____	1010	_____
_____	1020	_____
_____	2010	_____
_____	2020/2120	_____

**Lab Science**  
 \_\_\_\_\_

**Quantitative Literacy**  
 \_\_\_\_\_ EITHER MATH 1310 OR MATH 1340 & MATH 1350

**Multidisciplinary Component** Select from approved offerings, in consultation with an advisor and a faculty mentor. Four courses total, each with a different subject prefix. At least two courses at 3000/4000 level. Multidisciplinary component courses may not fulfill major, minor, or BGP requirements.

_____	_____
_____	_____
_____	_____

**FSCI Major Core Requirements (38 Hrs.)**

Hrs	Grade	
4	_____	BIOL 2040 Concepts in Biology I
4	_____	BIOL 2050 Concepts in Biology II
4	_____	BIOL 3310 Human Anatomy and Physiology
4	_____	BIOL 3320 Human Anatomy and Physiology II
3	_____	CHEM 1770 Intro to Forensic Science
3	_____	CRJU 4400 Law, Evidence, and Procedure in Forensic Science
3	_____	CRJU 4510 Criminal Justice Ethics
3	_____	MATH 2470 Fund. Of Statistics
5	_____	PHYS 2010 or 2110 University Physics I
5	_____	PHYS 2020 or 2120 University Physics II

**FSCI Forensic Chemistry Specialization Requirements (15-16 Hrs.)**

Hrs	Grade	
3-4	_____	CHEM 3520 Essentials of Physical Chemistry OR CHEM 4050 Physical Chemistry
3	_____	CHEM 4220 Chemical Separations
3	_____	FSCI 4300 Pharm/Toxicology Drugs of Abuse
3	_____	CHEM 4660 Spectroscopic Methods in Organic Chemistry
3	_____	FSCI 4890 Internship OR FSCI 4990 Capstone

**Additional Specific Discipline Requirements (25-26 hours)**

These courses also fulfill the requirements for a minor in chemistry. Consult with an advisor about declaring the minor.

Hrs	Grade	
4	_____	CHEM 1230 General Chemistry I and
1	_____	CHEM 1240 General Chemistry I Lab OR
5	_____	CHEM 1350 General Chemistry
4	_____	CHEM 1270 or 1370 General Chemistry
1	_____	CHEM 1280 or 1380 General Chemistry Lab
3	_____	CHEM 2010 Quantitative Chemical Analysis
3	_____	CHEM 3080 Basic Biochemistry OR
5	_____	CHEM 4450 Biochemistry
3	_____	CHEM 3410 Organic Chemistry
3	_____	CHEM 3440 Organic Chemistry
1-2	_____	CHEM 3450 Organic Chemistry Lab OR
	_____	CHEM 3460 Organic Chemistry Lab

All core, specialization, and additional requirement courses must be taken for a letter grade and passed with a grade of C or better.

**Fall 2020**  
**Bachelor of Science in Forensic Science**  
**Specialization in Forensic Examination**



**BG Perspective (BGP) Requirements**

Must complete at least 1 course in each of the following:

English Composition and Oral Communication Course	Credits
_____	_____
Quantitative Literacy	
_____	_____

Must Complete at least 2 courses in each of the following:

Humanities and the Arts	
_____	_____
_____	_____
Natural Sciences	
_____	_____
_____	_____
Social and Behavioral Sciences	
_____	_____
_____	_____

Complete total required BGP credit hours by selecting courses from any of the above categories:

_____	_____
_____	_____
_____	_____

**University Requirements** Designated courses in Humanities and the Arts and the Social and Behavioral Sciences domains may be used to fulfill both the BGP requirement and one of the following university requirements:

Cultural Diversity in the US	_____
International Perspective	_____

**Composition Requirement:**

_____	_____
_____	_____

Total BGP Credits: Must be at least 36 \_\_\_\_\_

**Arts & Sciences Requirements**

Foreign Language (\_\_\_\_ yrs of HS \_\_\_\_\_)

_____	1010	_____
_____	1020	_____
_____	2010	_____
_____	2020/2120	_____

**Lab Science**

\_\_\_\_\_

**Quantitative Literacy**

\_\_\_\_\_ EITHER MATH 1310 OR MATH 1340 & MATH 1350

**Multidisciplinary Component** Select from approved offerings, in consultation with an advisor and a faculty mentor. Four courses total, each with a different subject prefix. At least two courses at 3000/4000 level. Multidisciplinary component courses may not fulfill major, minor, or BGP requirements.

_____	_____
_____	_____
_____	_____

**FSCI Major Core Requirements (38 Hrs.)**

Hrs	Grade	
4	_____	BIOL 2040 Concepts in Biology I
4	_____	BIOL 2050 Concepts in Biology II
4	_____	BIOL 3310 Human Anatomy and Physiology I
4	_____	BIOL 3320 Human Anatomy and Physiology II
3	_____	CHEM 1770 Intro to Forensic Science
3	_____	CRJU 4400 Law, Evidence, and Procedure in Forensic Science
3	_____	CRJU 4510 Criminal Justice Ethics
3	_____	MATH 2470 Fund. Of Statistics
5	_____	PHYS 2010 or 2110 University Physics I
5	_____	PHYS 2020 or 2120 University Physics II

**FSCI Forensic Examination Specialization Requirements (15 Hrs.)**

Hrs	Grade	
3	_____	FSCI 3110 Latent Prints
3	_____	FSCI 3120 Trace Evidence Analysis
3	_____	FSCI 4100 Principles of Crime Scene Invest.
3	_____	BIOL 4230 OR FSCI 4230 Forensic Biology
3	_____	FSCI 4890 Internship OR FSCI 4990 Capstone

**Additional Specific Discipline Requirements (25-26 hours)**

These courses also fulfill the requirements for a minor in chemistry. Consult with an advisor about declaring the minor.

4	_____	CHEM 1230 General Chemistry I and
1	_____	CHEM 1240 General Chemistry I Lab OR
5	_____	CHEM 1350 General Chemistry
4	_____	CHEM 1270 or 1370 General Chemistry
1	_____	CHEM 1280 or 1380 General Chemistry Lab
3	_____	CHEM 2010 Quantitative Chemical Analysis
3	_____	CHEM 3080 Basic Biochemistry OR
3	_____	CHEM 4450 Biochemistry
5	_____	CHEM 3410 Organic Chemistry
3	_____	CHEM 3440 Organic Chemistry
1-2	_____	CHEM 3450 Organic Chemistry Lab OR
	_____	CHEM 3460 Organic Chemistry Lab

All core, specialization, and additional requirement courses must be taken for a letter grade and passed with a grade of C or better.

**FSCI Requirements:**

- All core, specialization, and additional requirement courses must be taken for a letter grade and passed with a grade of C or better.

**University Requirements:**

- You must complete a minimum of 122 credit hours. *(This is a typical situation; you may have to complete more depending on your particular circumstances)*
- You must complete 30 credit hours at BGSU.
- You must complete 40 hours at the 3000 and 4000 level.
- You must complete WRIT 1120.
- You must maintain a 2.0 cumulative GPA.
- You must complete 36 hours in the BG Perspective (BGP) courses.
- You must have a declared minor.

**Arts and Sciences Requirements:**

- You must complete up through the fourth level of a foreign language.
- You must complete at least one Lab Science Course.
- You must complete Math 1310 or 1340 and 1350.
- You must complete the Multidisciplinary Requirement. *(Each class must come from a different prefix, these cannot double count anywhere else in any of your degree programs, and two must be at the 3000 or 4000 level)*

Any substitution or waiver of courses required for your major or minor program must originate in the department/school offering the major or minor and must be approved by the College Office.

To ensure a timely graduation, see a College Advisor during the semester prior to your intended graduation.

Remember to complete an Application for Graduation by the end of the second week of classes during the fall or spring semester, or by the end of the first week of the summer semester. For the specific dates, check your DARS. You may log onto MyBGSU to complete the online application. After the deadlines, you will need to complete an application in person in the College Office.

**7.1 Academic Load**

A student's enrollment status is determined by the number of class hours the student is enrolled during a semester. A full-time undergraduate student is enrolled for 12 or more semester hours. A part-time undergraduate student is enrolled for fewer than 12 semester hours. Based on institutional policy, there are designated internship and co-operative

education classes that are considered to be enrolled in a full-time academic experience at BGSU. Students should consult with their college office when scheduling internships and co-operative education classes if they have any questions.

The academic load of a full-time undergraduate student will not be fewer than 12 hours at any time. A full-time student normally should be registered for 15-16 hours per semester. Enrollment for more than 18 hours requires the approval of the student's college office.

Students who maintain an academic load of 15-16 hours per semester will make progress toward a timely degree completion and will advance in class standing each year, allowing them such benefits as priority for class registration and student housing.

A full-time student who drops enough hours to become a part-time student is eligible to remain in University-owned housing and to retain membership in University organizations; however, the student is subject to the following restrictions:

- Ineligibility for intercollegiate athletics;
- Possible reduction of financial aid awards.

## 7.2 Sample Academic Plan – Forensic Biology\*

*\* Individual academic plans will vary by student due to: years of high school foreign language completed, math placement, writing placement, and attainment of transfer credits, advanced placement, or college credit plus. Students should meet with their academic advisor and/or faculty mentor to discuss their personal situation and preferences. The sample academic plan is meant to provide a general outline and timing of when students should complete the core Forensic Science coursework and does not include all course requirements, such as Bowling Green Perspective (BGP) and Multi-Disciplinary Component (MDC) courses.*

Please utilize this planning tool in conjunction with your Forensic Science Biology Check Sheet and your Degree Audit. It is important to note that the College office utilizes your Degree Audit to verify all requirements are met upon graduation.

### First Year

Fall Semester (credits)	Spring Semester (credits)
BGSU 1910 (1)	
BIOL 2040 (4) (Prerequisite for BIOL 2050)	BIOL 2050 (4) (Prerequisite for BIOL 3500, BIOL 3310, & FSCI 4230)
CHEM 1770 (3)	
CHEM 1230 & 1240 or CHEM 1350 (5) (Prerequisite for CHEM 1270/1370)	CHEM 1270 & 1280 or CHEM 1370 & 1380 (5) (Prerequisite for CHEM 2010 & CHEM 3410)
MATH 1310 (5) (Prerequisites or placement required) (Prerequisite for MATH 2470)	WRIT 1120 (3) (Prerequisites or placement required)

**Second Year**

Fall Semester (credits)	Spring Semester (credits)
PHYS 2010 or 2110 (5) (Prerequisite for PHYS 2020/2120)	PHYS 2020 or 2120 (5)
CHEM 3410 (5) (Prerequisite for CHEM 3440)	CHEM 3440 (5) (Corequisite for CHEM 3450/60) (Prerequisite for CHEM 3080 or 4450)
MATH 2470 (3)	CHEM 3450 or 3460 (1-2) (Corequisite for CHEM 3440)
	CHEM 2010 (3)

**Third Year**

Fall Semester (credits)	Spring Semester (credits)
BIOL 3500 (4) (Prerequisite for FSCI 4240 & BIOL 4080)	CHEM 3080 (3) (May take CHEM 4450 typically offered in Fall)
BIOL 3310 (4) (Prerequisite for BIOL 3320)	BIOL 3320 (4)
FSCI 4230 (3) (Prerequisite for FSCI 4240) (Accelerated MS students <i>must</i> take FSCI 5230)	FSCI 4240 (3) (Prerequisite for FSCI 4990) ♦

♦ *As a culminating experience, Forensic Science majors have the choice of completing FSCI 4700 (Research), FSCI 4890 (Internship), or FSCI 4990 (Capstone). FSCI 4890 is an external internship that students find themselves, usually at a crime laboratory although other options may be allowed at the discretion of the faculty advisor, and is typically completed over the summer. To receive course credit, students doing an external internship must still register for FSCI 4890 even if the internship is not physically being completed at BGSU. The capstone (FSCI 4990) is traditionally offered in the Summer and Spring semesters. Forensic Biology Specialization students take this course with Dr. Oechsle and must complete FSCI 4230 and FSCI 4240 prior to registering for FSCI 4990.*

**Fourth Year**

Fall Semester (credits)	Spring Semester (credits)
CRJU 4510 (3) (Accelerated MS students <i>must</i> take CRJU 6510 typically offered in Spring)	CRJU 4400 (3) (Accelerated MS students <i>must</i> take FORI 5400)
BIOL 4080 (3)	FSCI 4990 (3) (If not completed during Summer)
CHEM 4450 (3) (May take CHEM 3080 typically offered in Spring)	

### 7.3 Sample Academic Plan – Forensic Chemistry\*

\* Individual academic plans will vary by student due to: years of high school foreign language completed, math placement, writing placement, and attainment of transfer credits, advanced placement, or college credit plus. Students should meet with their academic advisor and/or faculty mentor to discuss their personal situation and preferences. The sample academic plan is meant to provide a general outline and timing of when students should complete the core Forensic Science coursework and does not include all course requirements, such as Bowling Green Perspective (BGP) and Multi-Disciplinary Component (MDC) courses.

Please utilize this planning tool in conjunction with your Forensic Science Chemistry Check Sheet and your Degree Audit. It is important to note that the College office utilizes your Degree Audit to verify all requirements are met upon graduation.

#### First Year

Fall Semester (credits)	Spring Semester (credits)
BGSU 1910 (1)	
BIOL 2040 (4) (Prerequisite for BIOL 2050)	BIOL 2050 (4) (Prerequisite for BIOL 3310)
CHEM 1770 (3)	
CHEM 1230 & 1240 or CHEM 1350 (5) (Prerequisite for CHEM 1270/1370)	CHEM 1270 & 1280 or CHEM 1370 & 1380 (5) (Prerequisite for CHEM 2010 & CHEM 3410)
MATH 1310 (5) (Prerequisites or placement required) (Prerequisite for CHEM 3520, CHEM 4220, & MATH 2470)	WRIT 1120 (3) (Prerequisites or placement required)

#### Second Year

Fall Semester (credits)	Spring Semester (credits)
PHYS 2010 or 2110 (5) (Prerequisite for PHYS 2020/2120)	PHYS 2020 or 2120 (5) (Pre- or Co-requisite for CHEM 3520)
CHEM 3410 (5) (Prerequisite for CHEM 3440)	CHEM 3440 (5) (Corequisite for CHEM 3450/60) (Prerequisite for CHEM 3080 or 4450) (Prerequisite for CHEM 4220)
MATH 2470 (3)	CHEM 3450 or 3460 (1-2) (Corequisite for CHEM 3440) (Prerequisite for CHEM 4220)
	CHEM 2010 (3) (Prerequisite for CHEM 4220)

**Third Year**

Fall Semester (credits)	Spring Semester (credits)
FSCI 4300 (3) (Prerequisite for FSCI 4990) ♦ (Accelerated MS students <i>must</i> take FSCI 5300)	CHEM 3080 (3) (May take CHEM 4450 typically offered in Fall)
BIOL 3310 (4) (Prerequisite for BIOL 3320)	BIOL 3320 (4)
	CHEM 3520 (3) (May take CHEM 4050 typically offered in Fall)

♦ *As a culminating experience, Forensic Science majors have the choice of completing FSCI 4700 (Research), FSCI 4890 (Internship), or FSCI 4990 (Capstone). FSCI 4890 is an external internship that students find themselves, usually at a crime laboratory although other options may be allowed at the discretion of the faculty advisor, and is typically completed over the summer. To receive course credit, students doing an external internship must still register for FSCI 4890 even if the internship is not physically being completed at BGSU. The capstone (FSCI 4990) is traditionally offered in the Summer and Spring semesters. Forensic Chemistry Specialization students take this course with Dr. Worst and must complete FSCI 4300 prior to registering for FSCI 4990.*

**Fourth Year**

Fall Semester (credits)	Spring Semester (credits)
CRJU 4510 (3) (Accelerated MS students <i>must</i> take CRJU 6510 typically offered in Spring)	CRJU 4400 (3) (Accelerated MS students <i>must</i> take FORI 5400)
CHEM 4660 (3)	FSCI 4990 (3) (If not completed during Summer)
CHEM 4450 (3) (May take CHEM 3080 typically offered in Spring)	CHEM 4220 (3)
CHEM 4050 (3) (May take CHEM 3520 typically offered in Spring)	

## 7.4 Sample Academic Plan – Forensic Examinations\*

\* Individual academic plans will vary by student due to: years of high school foreign language completed, math placement, writing placement, and attainment of transfer credits, advanced placement, or college credit plus. Students should meet with their academic advisor and/or faculty mentor to discuss their personal situation and preferences. The sample academic plan is meant to provide a general outline and timing of when students should complete the core Forensic Science coursework and does not include all course requirements, such as Bowling Green Perspective (BGP) and Multi-Disciplinary Component (MDC) courses.

Please utilize this planning tool in conjunction with your Forensic Science Examinations Check Sheet and your Degree Audit. It is important to note that the College office utilizes your Degree Audit to verify all requirements are met upon graduation.

### First Year

Fall Semester (credits)	Spring Semester (credits)
BGSU 1910 (1)	
BIOL 2040 (4) (Prerequisite for BIOL 2050)	BIOL 2050 (4) (Prerequisite for BIOL 3310 & FSCI 4230)
CHEM 1770 (3)	
CHEM 1230 & 1240 or CHEM 1350 (5) (Prerequisite for CHEM 1270/1370)	CHEM 1270 & 1280 or CHEM 1370 & 1380 (5) (Prerequisite for CHEM 2010 & CHEM 3410)
MATH 1310 (5) (Prerequisites or placement required) (Prerequisite for MATH 2470)	WRIT 1120 (3) (Prerequisites or placement required)

### Second Year

Fall Semester (credits)	Spring Semester (credits)
PHYS 2010 or 2110 (5) (Prerequisite for PHYS 2020/2120)	PHYS 2020 or 2120 (5)
CHEM 3410 (5) (Prerequisite for CHEM 3440)	CHEM 3440 (5) (Corequisite for CHEM 3450/60) (Prerequisite for CHEM 3080 or 4450)
MATH 2470 (3)	CHEM 3450 or 3460 (1-2) (Corequisite for CHEM 3440)
	CHEM 2010 (3)

### Third Year

Fall Semester (credits)	Spring Semester (credits)
FSCI 3120 (3)	FSCI 3110 (3)
BIOL 3310 (4) (Prerequisite for BIOL 3320)	BIOL 3320 (4)
FSCI 4100 (3) (Typically offered Fall & Spring) (Prerequisite for FSCI 4990) ♦	CHEM 3080 (3) (May take CHEM 4450 typically offered in Fall)

◆ *As a culminating experience, Forensic Science majors have the choice of completing FSCI 4700 (Research), FSCI 4890 (Internship), or FSCI 4990 (Capstone). FSCI 4890 is an external internship that students find themselves, usually at a crime laboratory although other options may be allowed at the discretion of the faculty advisor, and is typically completed over the summer. To receive course credit, students doing an external internship must still register for FSCI 4890 even if the internship is not physically being completed at BGSU. **The capstone (FSCI 4990) is traditionally offered in the Spring, Summer, and Fall semesters. Forensic Examination Specialization students take this course with Mr. Lynn and must complete FSCI 4100 prior to registering for FSCI 4990.***

#### Fourth Year

Fall Semester (credits)	Spring Semester (credits)
CRJU 4510 (3) (Accelerated MS students <i>must</i> take CRJU 6510 typically offered in Spring)	CRJU 4400 (3) (Accelerated MS students <i>must</i> take FORI 5400)
FSCI 4230 (3) (Accelerated MS students <i>must</i> take FSCI 5230)	FSCI 4990 (3) (If not completed during Summer or Fall)
CHEM 4450 (3) (May take CHEM 3080 typically offered in Spring)	

## 8 COURSE DESCRIPTIONS

### **BGSU 1910 First Year Seminar (1)**

Year Seminar program offers first time, first year BGSU students an opportunity to explore an academic topic of interest to engage them in the academic life of the university. Offered in a variety of intriguing topics, the FYF seminars are limited to 20 students each, providing new students the opportunity to engage with faculty and other first-year students in a small class setting.

### **WRIT 1120 Seminar in Research Writing (3)**

Builds on foundational understandings of academic reading and writing with a focus on inquiry-based writing. By engaging a range of writing tasks, both informal and formal, students pursue person- and library-based research writing that has meaning to them personally. Students also continue to build confidence as readers, writers, and critical thinkers, adding their voices to ongoing conversations. Using a workshop approach, students practice strategies for representing, through reflective writing, their research and composing processes to a range of audiences. ePortfolio based. Placement through UWP online pre-screening or prior credit for WRIT 1110. Graded ABC/No Credit.

### **CHEM 1770 Introduction to Forensic Science (3)**

A survey of the field of forensic science--the application of science to the law. Topics include the identification, proper collection/documentation, and analysis of evidence through microscopy, wet chemistry, spectroscopic methods, toxicology, serology, DNA typing, and fingerprinting. Prerequisite: Forensic Science majors specializing in Forensic Biology, Forensic Chemistry, or Forensic Examination.

*(Typically offered in Fall)*

### **MATH 1310 Calculus and Analytical Geometry (5)**

Differential and integral calculus including applications. The MATH 1310-2320-2330 sequence is a traditional calculus course for well-prepared students and is prerequisite for all advanced mathematics and statistics courses. Prerequisites: (1) two years of high school algebra, one year of geometry, one-half year of trigonometry, ACT math score of 24 or higher and satisfactory score on department placement test; or (2) grade of C or higher in MATH 1280, MATH 1290 or MATH 1300.

*(Students have the option to complete MATH 1340 and MATH 1350 instead)*

### **MATH 1340 Calculus and Analytical Geometry 1A (3)**

Limits, the derivative, differentiation techniques and applications of the derivative. MATH 1340 and MATH 1350 is a two-semester sequence which includes all the topics from MATH 1310. Not open to students with a grade of C or higher in MATH 1310 or MATH 1260.

Prerequisites: same as MATH 1310.

*(Students have the option to complete MATH 1310 instead, but must also take MATH 1350 if taking MATH 1340)*

**MATH 1350 Calculus and Analytical Geometry 1B (3)**

The definite integral; the fundamental theorem; indefinite integrals; integration by parts, by substitution and using tables; and applications of definite and indefinite integrals. Prerequisite: grade of C or higher in MATH 1340.

*(Students have the option to complete MATH 1310 instead, but must also take MATH 1340 if taking MATH 1350)*

**MATH 2470 Fundamentals of Statistics (5)**

Descriptive statistics. Discrete probability models, sampling distributions, statistical estimation, and testing. Prerequisite: C or better in MATH 1260, MATH 1310, or MATH 1350.

**PHYS 2010 College Physics I (5)**

First term of an introductory physics sequence using algebra and trigonometry, but not calculus. Topics include motion, forces, energy, fluids, heat and simple harmonic motion. Four lecture-recitations and one two-hour laboratory. Prerequisite: satisfactory score on the math placement exam or a grade of C or higher in MATH 1120 or in MATH 1200 or above.

*(Students have the option to complete PHYS 2110 instead)*

**PHYS 2110 University Physics I (5)**

Introductory calculus-based physics sequence for science and engineering majors. Kinematics in one, two and three dimensions; Newtonian mechanics; gravitation; heat and thermodynamics. Corequisite: MATH 1310.

*(Students have the option to complete PHYS 2010 instead)*

**PHYS 2020 College Physics II (5)**

PHYS 2010 continued. Simple harmonic motion, wave motion, sound, electricity, magnetism, electrical measurements, optics; atomic, nuclear and solid-state physics. Prerequisite: PHYS 2010. *(Students have the option to complete PHYS 2120 instead)*

**PHYS 2120 University Physics II (5)**

PHYS 2110 continued. Wave motion, sound, optics, electricity and magnetism. Prerequisite: PHYS 2110. Corequisite: MATH 2320.

*(Students have the option to complete PHYS 2020 instead)*

**BIOL 2040 Concepts in Biology I (4)**

Introduction to ecological and evolutionary biology, Mendelian and population genetics, and the major groups of plants, animals and microbes.

**BIOL 2050 Concepts in Biology II (4)**

Introduction to molecular and cellular biology, physiology and organ systems. Prerequisite: BIOL 2040.

**BIOL 3130 Microbiology (4)**

Methods of isolation, culture and identification; physiological, genetic and applied aspects of microorganisms. Prerequisites: Grade of C or better in BIOL 2050, and CHEM 1230 and CHEM 1240 or CHEM 1250 or CHEM 1350.

*(Not required for the FSCI major, but many pre-med and dual-major students elect to take this course)*

**BIOL 3310 Human Anatomy and Physiology I (4)**

Anatomical and physiological aspects of cells and tissues and the integumentary, skeletal, muscular and nervous systems. Prerequisite: BIOL 2050.

**BIOL 3320 Human Anatomy and Physiology II (4)**

Anatomical and physiological aspects of circulation, respiration, digestion, excretion, endocrinology and reproduction. Prerequisite: BIOL 2050.

**BIOL 3500 General Genetics (4)**

Theoretical and applied aspects of inheritance. Molecular, chromosomal and population levels of heredity in both prokaryotes and eukaryotes. Prerequisites: BIOL 2040 and BIOL 2050.

*(Required for the FSCI Majors Specializing in Forensic Biology Only)*

**BIOL 4080 Molecular Biology (3)**

Function and structural relationship of genes and gene products, with emphasis on the applications of molecular biology to the diverse fields of biological research. Prerequisite: BIOL 3500 or permission of instructor.

*(Typically offered in Fall)*

*(Required for the FSCI Majors Specializing in Forensic Biology Only)*

**CHEM 1230 General Chemistry I (4)**

The first in a two-course sequence for science majors and students in other science-related programs. Topics include atomic structure, molecular structure and bonding, common classes of chemical reactions, stoichiometric calculations, thermochemistry, and properties of gases. Both conceptual understanding and problem-solving skills are emphasized. Prerequisite: MATH 1200 or MATH 1220 or MATH 1230 or MATH 1260 or MATH 1280 or MATH 1300 or MATH 1310 or MATH 1340 or Math placement score of 41 or higher. High school chemistry is recommended. Corequisite: CHEM 1240.

*(Students have the option to complete CHEM 1350 instead)*

**CHEM 1240 General Chemistry I Laboratory (1)**

Laboratory course taken in conjunction with CHEM 1230.

*(Students have the option to complete CHEM 1350 instead)*

**CHEM 1350 General Chemistry (5)**

The first in a two-course sequence for well-prepared chemistry majors, science majors, and students in other science-related programs. Topics include atomic structure, molecular structure and bonding, common classes of chemical reactions, stoichiometric calculations, thermochemistry, and properties of gases. Both conceptual understanding and problem-solving skills are emphasized. Prerequisites: high school chemistry or CHEM 1090 and MATH 1220 or higher or Math placement score of 41 or higher.

*(Students have the option to complete CHEM 1230 and CHEM 1240 instead)*

**CHEM 1270 General Chemistry II (4)**

Continuation of the sequence beginning with CHEM 1230 and CHEM 1240. Chemical equilibrium is a major theme of the course. Acid-base chemistry, buffers, and titration curves are studied in detail, as are solubility equilibria. Additional topics include chemical kinetics, entropy, Gibbs energy, and electrochemistry. Prerequisite: 1) C or better in CHEM 1230 and CHEM 1240 or CHEM 1350, and 2) MATH 1200 or MATH 1220 or MATH 1230 or MATH 1260 or MATH 1280 or MATH 1300 or MATH 1340 or Math Placement score of 41 or higher. Corequisite: CHEM 1280.

*(Students have the option to complete CHEM 1370 instead)*

**CHEM 1280 General Chemistry II Laboratory (1)**

A laboratory course taken in conjunction with CHEM 1270. Prerequisite: C or better in CHEM 1230 and CHEM 1240 or CHEM 1350. Corequisite: CHEM 1270.

*(Students have the option to complete CHEM 1380 instead)*

**CHEM 1370 General Chemistry (4)**

CHEM 1350 continued. Prerequisites: C or better in CHEM 1350, or B or better in CHEM 1250 and consent of instructor. Corequisite: CHEM 1380.

*(Students have the option to complete CHEM 1270 instead)*

**CHEM 1380 General Chemistry Laboratory (1)**

Emphasis on quantitative procedures. Prerequisite: C or better in CHEM 1250 or CHEM 1350. Corequisite: CHEM 1370.

*(Students have the option to complete CHEM 1280 instead)*

**CHEM 2010 Quantitative Chemical Analysis (3)**

Sampling, sample preparation, calibration, sources of error, propagation of uncertainty, statistics, and quality assurance as they relate to various analytical methods including titrations, gravimetry, electrochemistry, spectrophotometry, and chromatography. Prerequisite: C or better in CHEM 1270 and CHEM 1280 or CHEM 1370 and CHEM 1380.

*(Typically offered in Spring)*

**CHEM 3410 Organic Chemistry (5)**

The first course in a two-semester sequence of organic chemistry. The structure and reactivity of organic molecules are examined. Topics include mechanisms, stereochemistry, molecular orbital theory, conformational analysis, synthesis and modern instrumental techniques. In lab students will synthesize and study the properties of organic compounds. Prerequisites: CHEM 1270 and 1280 or CHEM 1370 and 1380. Credit allowed for only one of CHEM 3060, 3410. (*FSCI students do not have the option to complete CHEM 3060 instead*)

**CHEM 3440 Organic Chemistry (3)**

Continuation of CHEM 3410. The second of a two-semester sequence of organic chemistry. Taken in conjunction with laboratory course CHEM 3450 or CHEM 3460. Biological compounds such as carbohydrates, lipids, amino acids, proteins and nucleic acids are studied in addition to the continued study of common functional groups. Other topics include polymers, catalysis, oxidation and reduction reactions, metabolism, pericyclic reactions, and the chemistry of drugs. Prerequisite: C or better in CHEM 3410. Corequisite: CHEM 3450 or CHEM 3460.

**CHEM 3450 Organic Chemistry Laboratory (2)**

A laboratory course taken in conjunction with CHEM 3440. Experiences include chemical separations, examination of reaction selectivity, and multi-step synthesis. Chemical tests and modern instrumental techniques are used to identify compounds. Two three-hour lab periods. Prerequisite: C or better in CHEM 3410. Corequisite: CHEM 3440. (*Students have the option to complete CHEM 3460 instead*)

**CHEM 3460 Organic Chemistry Laboratory (1)**

A laboratory course taken in conjunction with CHEM 3440. One three-hour lab period. Experiences include chemical separations and examination of reaction selectivity. Chemical tests and modern instrumental techniques are used to identify compounds. Prerequisite: C or better in CHEM 3410. Corequisite: CHEM 3440. (*Students have the option to complete CHEM 3450 instead*)

**CHEM 3080 Basic Biochemistry (3)**

A survey course of biochemistry including biomacromolecules and metabolism. For students whose program does not require full-year course. Prerequisite: C or better in CHEM 3060 or previous credit in CHEM 3440 or concurrent enrollment in CHEM 3440; BIOL 2050 recommended. Credit allowed for only one of CHEM 3080, 4450. (*Students have the option to complete CHEM 4450 instead*)  
(*Typically offered in Spring*)

**CHEM 4450 General Biochemistry (3)**

Structure, function, chemical, and physical properties of biomolecules with an emphasis on biomacromolecules. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460. BIOL 2050 is strongly recommended. Credit allowed for only one of CHEM 3080, 4450. (*Students have the option to complete CHEM 3080 instead*)  
(*Typically offered in Fall*)

**CHEM 3520 Essentials of Physical Chemistry (3)**

A survey course of Physical Chemistry. For students whose program does not require full-year course. Prerequisites: CHEM 1270-CHEM 1280 or CHEM 1370-CHEM 1380, MATH 1310 or MATH 1340-1350. Prerequisites or corequisite: PHYS 2020 or PHYS 2120.

*(Students have the option to complete CHEM 4050 instead; Required for the FSCI Majors Specializing in Forensic Chemistry Only)*

*(Typically offered in Spring)*

**CHEM 4050 Physical Chemistry (3)**

Thermodynamics and quantum chemistry. Prerequisites: MATH 2320 and either PHYS 2120 or PHYS 2020 and either CHEM 1370 or CHEM 1270.

*(Students have the option to complete CHEM 3520 instead; Required for the FSCI Majors Specializing in Forensic Chemistry Only)*

*(Typically offered in Fall)*

**CHEM 4220 Chemical Separations (3)**

Theory and practice of chemical separations including gas, high performance liquid, thin layer, and supercritical fluid chromatography as well as electrophoresis and potential driven chromatography. Prerequisites: CHEM 2010, CHEM 3440, CHEM 3450, and MATH 1310.

*(Required for the FSCI Majors Specializing in Forensic Chemistry Only)*

*(Typically offered in Spring)*

**CHEM 4660 Spectroscopic Methods in Organic Chemistry (3)**

Organic structure determination by spectroscopic techniques, with emphasis on infrared, ultraviolet and nuclear magnetic resonance spectroscopy, and mass spectrometry. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460.

*(Required for the FSCI Majors Specializing in Forensic Chemistry Only)*

*(Typically offered in Fall)*

**CRJU 4400 Law, Evidence and Procedure in Forensic Science (3)**

This class provides an overview and examination of the legal aspects of physical evidence including rules of evidence, procedural rules, and the role of expert witnesses. The course also includes direct and cross-examination of students in a moot court setting.

*(Accelerated MS students **must** complete FORI 5400 instead)*

*(Typically offered in Spring)*

**CRJU 4510 Criminal Justice Ethics (3)**

This course discusses ethics, morality, and values and how they manifest themselves in the criminal justice system. The course discusses a variety of dilemmas facing criminal justice agencies and practitioners. Students will be challenged to consider their own values vis-a-vis their roles as social control agents and members of a democratic society.

*(Accelerated MS students **must** complete CRJU 6510 instead)*

*(Typically offered in Fall)*

**FSCI 3110 Latent Prints (3)**

This course assists students in understanding the principles, probative value, and methodologies utilized by crime laboratories in the collection, examination, and comparison of evidentiary materials for latent print impressions. This course is primarily lecture based, but students will also complete hands-on practical exercises.

*(Required for the FSCI Majors Specializing in Forensic Examinations Only)*

*(Typically offered in Spring)*

**FSCI 3120 Microscopy, Materials, and Trace Evidence Analysis (3)**

This course assists students in understanding the principles, probative value, and methodologies utilized by crime laboratories in the analysis and comparison of trace evidence. This course is primarily lecture based, but students will also complete hands-on practical exercises.

*(Required for the FSCI Majors Specializing in Forensic Examinations Only)*

*(Typically offered in Fall)*

**FSCI 4100 Principles of Crime Scene Investigation (3)**

This course familiarizes forensic science students across all specializations with the practical issues faced by crime scene investigators and the methods used in the collection, preservation and analysis of crime scene evidence. The course will employ both lecture and hands-on learning strategies through the university crime house and forensic laboratories.

*(Required for the FSCI Majors Specializing in Forensic Examinations Only)*

*(Typically offered in Fall and Spring; Prerequisite for FSCI 4990)*

**FSCI 4230 Forensic Biology (3)**

This course provides students with an overview of the various sub-disciplines that comprise forensic biology and introduces students to biological evidence examination typically performed in a crime laboratory. This course is primarily lecture based, but students will also complete hands-on practical exercises.

*(Required for the FSCI Majors Specializing in Forensic Examinations of Forensic Biology)*

*(Accelerated MS students **must** complete FSCI 5230 instead)*

*(Typically offered in Fall; Prerequisite for FSCI 4240)*

**FSCI 4240 Forensic DNA Analysis (3)**

This course provides students with an overview of modern DNA typing in a forensic setting and a comprehensive description of the DNA analysis techniques used in a typical forensic laboratory. This course is primarily lecture based, but students will also complete hands-on practical exercises. Prerequisite: FSCI 4230; BIOL 3500 preferred.

*(Required for the FSCI Majors Specializing in Forensic Biology Only)*

*(Typically offered in Spring; Prerequisite for FSCI 4990)*

**FSCI 4300 Pharmacology/Toxicology of Drug Addiction (3)**

This course assists students in understanding why some drugs are addictive, how addiction can be treated, and the social and toxicologic consequences of drug addiction.

*(Required for the FSCI Majors Specializing in Forensic Chemistry Only)*

*(Accelerated MS students **must** complete FSCI 5300 instead)*

*(Typically offered in Fall; Prerequisite for FSCI 4990)*

**FSCI 4700 Research in Forensic Science (3-6)**

Introduction to research in area of forensic science. Projects chosen in consultation with adviser and may include library and laboratory work. Prerequisite: Consent of instructor. May be repeated up to 6 hours total.

*(Students have the option to complete FSCI 4890 or FSCI 4990 instead)*

**FSCI 4890 Forensic Science Internship (External) (3-6)**

This course provides Forensic Science majors with hands-on experience in a professional setting. Prerequisite: FSCI majors only, consent of the instructor. Graded S/U. Note: A background check may be required by the employing organization.

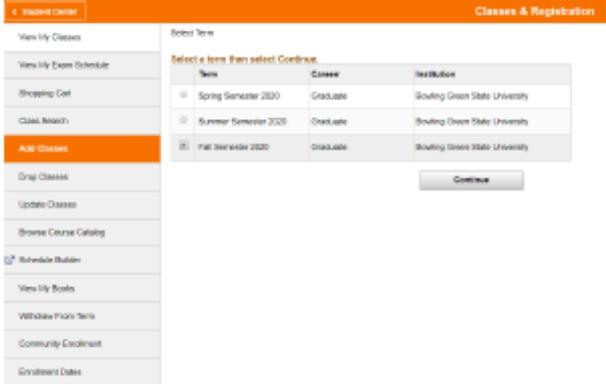
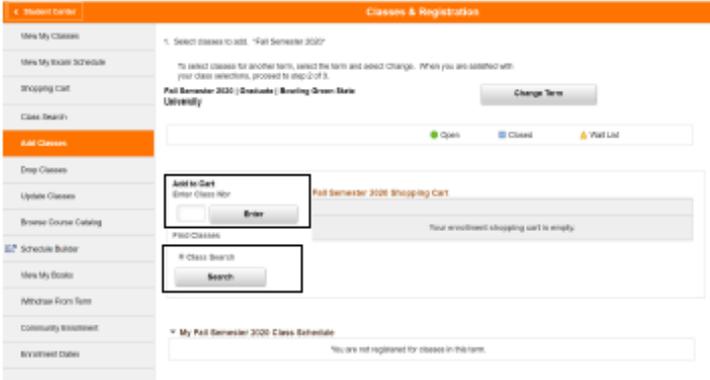
*(Students have the option to complete FSCI 4700 or FSCI 4990 instead)*

**FSCI 4990 Forensic Science Capstone (3)**

This course intends to develop students' abilities to properly conduct biological and/or chemical analyses as applied to the law. Students will use, troubleshoot, and maintain instrumentation; handle, analyze, and compare mock evidence samples; draw conclusions, apply statistics, and report results. The course will culminate in a moot court experience where students provide expert testimony. Prerequisite: FSCI 4240 or FSCI 4300 or FSCI 4100.

*(Students have the option to complete FSCI 4700 or FSCI 4890 instead)*

## 9 SELF-DIRECTED COURSE ENROLLMENT (ADDING CLASSES)

Enrolling Process/Adding a Class	Student Center/Enrollment Process												
<p style="text-align: center; color: #800080;"><b>Preparing for Self-Enrollment</b></p> <p style="text-align: center; color: #800080;"><b>Step 1</b></p> <p><b>Adding Classes:</b></p> <p>Logon to MyBGSU and click on the Student Center Card. In the Student Center, click on the Classes &amp; Registration Tile.</p> <p>Click on Add Classes from the Classes &amp; Registration menu.</p> <p>Select the term for which you wish to enroll and click Continue.</p>	<p style="text-align: center; color: #800080;"><b>What you need to do before you can self-enroll:</b></p> <p style="text-align: center; color: #800080;"><b>Search for classes using Search for Classes or Browse Catalog options and have your class numbers ready for enrolling.</b></p>												
<p><b>Adding Classes:</b></p> <p>Logon to MyBGSU and click on the Student Center Card. In the Student Center, click on the Classes &amp; Registration Tile.</p> <p>Click on Add Classes from the Classes &amp; Registration menu.</p> <p>Select the term for which you wish to enroll and click Continue.</p>	 <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th>Term</th> <th>Course</th> <th>Institution</th> </tr> </thead> <tbody> <tr> <td>Spring Semester 2020</td> <td>Graduate</td> <td>Bowling Green State University</td> </tr> <tr> <td>Summer Semester 2020</td> <td>Graduate</td> <td>Bowling Green State University</td> </tr> <tr> <td>Fall Semester 2020</td> <td>Graduate</td> <td>Bowling Green State University</td> </tr> </tbody> </table>	Term	Course	Institution	Spring Semester 2020	Graduate	Bowling Green State University	Summer Semester 2020	Graduate	Bowling Green State University	Fall Semester 2020	Graduate	Bowling Green State University
Term	Course	Institution											
Spring Semester 2020	Graduate	Bowling Green State University											
Summer Semester 2020	Graduate	Bowling Green State University											
Fall Semester 2020	Graduate	Bowling Green State University											
<p>Prepare to add classes to your shopping cart by entering the 5 digit class number and clicking Enter.</p> <p>You can also search for classes by clicking on Search.</p>	 <p><b>Add to Cart</b> Enter Class Num [Enter]</p> <p><b>Class Search</b> [Search]</p>												
<p>After you click Enter, any additional components associated with the class selected will be displayed. These components will be automatically enrolled when the enrollment process is completed.</p> <p>Click Next to proceed.</p>	 <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th>Description</th> <th>Section</th> <th>Schedule</th> <th>Location</th> <th>Instructor</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Common Exam</td> <td>1002</td> <td>Mo-F 10PM - 8:00PM</td> <td>Business Admin Room 1001</td> <td>B. Pickett</td> <td style="text-align: center;">●</td> </tr> </tbody> </table>	Description	Section	Schedule	Location	Instructor	Status	Common Exam	1002	Mo-F 10PM - 8:00PM	Business Admin Room 1001	B. Pickett	●
Description	Section	Schedule	Location	Instructor	Status								
Common Exam	1002	Mo-F 10PM - 8:00PM	Business Admin Room 1001	B. Pickett	●								

Enrolling Process/Adding a Class

Student Center/Enrollment Process

Course specific information will be displayed on the Enrollment Preferences screen.

If applicable:

Check the box to put yourself on a waitlist if the class is full when you attempt to register.

Enter the permission number provided by academic department.

Update the grading option using the Grading drop-down menu.

Credit hours can be adjusted on this screen for variable credit courses.

Click Next to proceed with putting the course in your shopping cart.

Continue to add courses as needed, set enrollment preferences as needed per course, and then click Proceed to Step 2 of 3 when you are satisfied with your class selections.

Review the classes in your shopping cart.

Click Previous to return and remove or add additional courses.

Click Finish Enrolling to process your request.

Enrolling Process/Adding a Class	Student Center/Enrollment Process									
<p><b>View Results</b></p> <p>Classes that were successful enrolled will display a green check mark in the Status column.</p> <p>Classes that are not added will display a red X in the Status Column. The error message will be displayed in the Message column.</p>	<div style="border: 1px solid #ccc; padding: 5px;"> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid #ccc;"> <span style="font-size: small;">← Student Center</span> <span style="font-size: small;">Classes &amp; Registrations</span> </div> <div style="display: flex;"> <div style="width: 25%; border-right: 1px solid #ccc; padding-right: 5px;"> <ul style="list-style-type: none"> <li>View My Classes</li> <li>View My Class Schedule</li> <li>Shopping Cart</li> <li>Class Search</li> <li style="background-color: #FFD700; padding: 2px;">Add Classes</li> <li>Drop Classes</li> <li>Update Classes</li> <li>Browse Course Catalog</li> <li>Schedule Builder</li> <li>View My Books</li> <li>Withdraw From Tests</li> <li>Continuity Enrollment</li> <li>Enrollment Dates</li> </ul> </div> <div style="width: 75%; padding-left: 5px;"> <div style="border-bottom: 1px solid #ccc; padding-bottom: 5px;"> <p style="font-size: x-small;">3. View results</p> <p style="font-size: x-small;">View the following status report for enrollment confirmations and errors.</p> <p style="font-size: x-small;">Fall Semester 2020   Graduate   Bowling Green State University</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <span style="font-size: x-small; color: green;">✔ Success: enrolled</span> <span style="font-size: x-small; color: red;">✘ Error: unable to add class</span> </div> </div> <div style="border-bottom: 1px solid #ccc; padding-bottom: 5px;"> <p style="font-size: x-small;">Fall Semester 2020 Enrollment Shopping Cart:</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th style="width: 20%;">Class</th> <th style="width: 60%;">Message</th> <th style="width: 20%;">Status</th> </tr> </thead> <tbody> <tr> <td>ACCT 3210</td> <td>Success: This class has been added to your schedule.</td> <td style="text-align: center; color: green;">✔</td> </tr> <tr> <td>SOC 1013</td> <td>Warning: CLASS 10011 is full. If a wait list is available, select Add Another Class to return to step 1. Select the class link, select the wait list option and resubmit your request.</td> <td style="text-align: center; color: red;">✘</td> </tr> </tbody> </table> </div> <div style="text-align: center; padding-top: 5px;"> <div style="display: flex; justify-content: center; gap: 10px;"> <span style="border: 1px solid #ccc; padding: 2px 10px; font-size: x-small;">My Class Schedule</span> <span style="border: 1px solid #ccc; padding: 2px 10px; font-size: x-small;">Add Another Class</span> </div> </div> </div> </div> </div>	Class	Message	Status	ACCT 3210	Success: This class has been added to your schedule.	✔	SOC 1013	Warning: CLASS 10011 is full. If a wait list is available, select Add Another Class to return to step 1. Select the class link, select the wait list option and resubmit your request.	✘
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**Note:** Many FSCI classes have closed enrollment or instructor permission required. If you find that you are unable to enroll yourself in a course, that might be why. To get added to a closed FSCI course, please e-mail Christina Guinsler ([cguinsl@bgsu.edu](mailto:cguinsl@bgsu.edu)) for permission.

## 10 PROGRESSION AND PERFORMANCE POLICY

The BGSU Undergraduate Catalog outlines “Unsatisfactory Academic Progress” (<https://www.bgsu.edu/catalog/academic-policies/unsatisfactory-academic-progress.html>) and describes criteria for academic progress, including to policies for academic probation, suspension, and dismissal.

A student whose cumulative BGSU grade point average is at least 2.0 is considered to be in good academic standing at the University.

A student whose cumulative BGSU GPA falls below 2.0 at the end of the semester will be placed on academic warning, unless the student's GPA falls in the probation/suspension/dismissal range. If the student's GPA is in the probation/suspension/dismissal range, the student will be:

- Placed on probation if the student has attempted\* fewer than 12 letter-graded credit hours at BGSU, or if the student's cumulative GPA is in the probation/suspension/dismissal range for the first time;
- Placed on suspension if the student has attempted\* 12 or more letter-graded credit hours at BGSU, and if the student has been placed on probation in any previous semester.
- Dismissed if the student has attempted\* 12 or more letter-graded credit hours at BGSU, and if the student has been placed on suspension in any previous semester.

\*Attempted hours include all courses that contribute to the GPA, including those for which the student received credit by earning grades of A, B, C, or D or for which the student did not receive credit due to grades of F, WF, or I.

Students who are not in good academic standing at the University may not transfer credits from another institution until they have returned to good standing at BGSU. Because grades are not transferred to BGSU, courses taken at another institution may not be used to improve a student's GPA at BGSU.

## 11 ACADEMIC CALENDARS

The BGSU Office of Academic and Student Affairs create academic calendars. The BSFS program recognizes the academic calendar is an essential instruction-planning tool. Current, as well as past and future academic calendars are posted on the BGSU website [Academic Calendars \(bgsu.edu\)](#).

BSFS students are encouraged to consult the academic calendar to identify semester/session start and end dates, holidays, breaks, final exam weeks, commencement and other campus-wide scheduled events.

## 12 BGSU CATALOG

The BGSU Office of Registration and Records maintains an electronic Catalog as a guide to the programs, policies, and courses that are part of undergraduate life at BGSU. The Catalog informs students of opportunities and requirements at several levels to guarantee they take advantage of all that BGSU has to offer and make steady progress toward their academic goals. BSFS students are encouraged to review the breadth of information available and utilize this valuable resource. The Catalog is available at <https://www.bgsu.edu/catalog.html>.

## 13 GRADING POLICY

The BSFS degree program follows grading policies specified by the university in the BGSU Catalog. <https://www.bgsu.edu/catalog/academic-policies/grading-policies.html>

## 14 ACADEMIC HONESTY

The rules of academic honesty set forth by Bowling Green State University in the [BGSU Academic Honesty Policy](#) and will be strictly enforced. Dishonesty in any form will not be tolerated. Please be aware that academic dishonesty includes (but is not limited to) *cheating, plagiarism, and collusion*. The course professor is normally allowed to establish the punishment for cheating or plagiarizing in a course, but dismissal is encouraged. Cheating or plagiarizing in the scientific research arena will result in dismissal from our graduate program. Clearly, unethical academic or scientific behaviors will have a negative impact on a developing career. Formal letters detailing the cheating, or plagiarism are kept in the student's file and are available to potential employers, as well as journal editors.

BGSU is a community of scholars. As members of this community, we each have the individual and collective responsibility to conduct our personal lives in the context of mutual regard for the rights, property and privileges of others.

In addition, to the above policies, the [Student Code of Academic Conduct](#) and the [Student Code of Conduct](#) can both be found at: <https://www.bgsu.edu/student-handbook/code-of-conduct.html>. These Codes create a set of expectations for student conduct, ensure a fair process for determining responsibility when student behavior may have deviated from those expectations and provide appropriate sanctions when a student and/or student organization has violated the Code(s).

## 15 GRIEVANCES

### 15.1 Student Complaint Procedure

The following describes the BGSU Forensic Science program procedure for handling student complaints. The procedure describes the mechanisms by which students are informed of their right to file a complaint; identify the institutional processes for filing such a complaint; as well as program requirements for the maintenance of records pursuant to complaints and resolutions.

### 15.2 Student Rights Notification

Forensic Science program students are notified of their right to lodge a complaint via provision of this document and detailed discussion in a new cohort welcoming event.

### 15.3 Complaint Process

If a student wishes to lodge a formal complaint against a member of the faculty or staff of the BGSU Forensic Science programs, the following procedure applies:

1. As circumstances permit, students should meet directly with the instructor or staff member to discuss the issue and seek resolution.
2. If direct meeting is not advisable or does not resolve the issue, the student should make an appointment with the Program Director for a confidential discussion of the complaint. The Program Director will seek to resolve the issue.
3. If there is no resolution at Step 2, the student will be referred to institutional student complaint procedures as specified by the Division of Student Affairs in the BGSU Student Handbook (<https://www.bgsu.edu/student-handbook.html>) or other applicable process as might be defined by the department, college or university.
4. If the complaint is against the Program Director and Step 1 of this procedure is unadvised, the student should move directly to the procedure described in the BGSU Student Handbook.

### 15.4 Complaint Record

Record of student complaints lodged against the program are maintained under authority of the Program Director in accordance with FEPAC retention requirements. Individual complaint records include, at minimum:

- Submitted written complaint or summation of the student issue
- Decisions at each step of the complaint process
- Complaint resolution or active status information