Undergraduate Student Handbook
Penn State Forensic Science Program

Program Office
329 Whitmore Building

Office Phone
(814) 867-0460

Office Hours
Monday – Friday
0730 – 1630

Program website
http://www.forensics.psu.edu
INTRODUCTION

This *Forensic Science Undergraduate Handbook* is a supplement to the Student Guide to General University Policies and Rules found at [www.studentaffairs.psu.edu/conduct/](http://www.studentaffairs.psu.edu/conduct/) 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 the Forensic Science by going to [www.starfish.psu.edu](http://www.starfish.psu.edu) to schedule an appointment.

VISION

The undergraduate program in forensic science at Penn State will provide open, welcoming, creative and adaptable teaching and research environments for its students and faculty that will have a positive impact on the global forensic science and law enforcement communities, and on society as a whole.

MISSION STATEMENT

The mission of the Forensic Science Program is to provide students with an intensive holistic criminalistics experience within a rich educational environment through a combination of the didactic, vocational, and practical approach to forensic science education that will enable students to reach the highest levels of intellectual achievement and personal growth.

The Forensic Science Program at Penn State is housed under the Eberly College of Science (ECoS). The mission of the Forensic Science Program is to provide students with a rich educational experience through a hands-on, practical approach to forensic science education that will enable those students to achieve their goals. Our multidisciplinary and demanding field of study requires that students complete a diverse and rigorous curriculum, leveraging the strengths of several departmental course offerings throughout ECoS and providing advanced criminalistics oriented courses in areas such as crime scene investigation, criminalistics, forensic molecular biology, forensic chemistry and expert testimony. Undergraduate students will be afforded an opportunity to participate in research activities. By producing well prepared future leaders in the forensic science community, Penn State will have a positive impact on crime solving which will greatly benefit society.
PROGRAM GOALS

The Forensic Science program will provide students with a strong foundation in the sciences. In addition, students will be introduced to criminalistics philosophy through intensive scientific and laboratory problem-solving skills that are necessary for their success in forensic science or other laboratory careers or graduate-level academic settings.

LEARNING OBJECTIVES

1. Students will develop an understanding of the scientific principles of crime scene investigation and reconstruction, including evidence collection and preservation.

2. Students will receive intensive hands-on training in forensic laboratory methodologies with respect to the examination and analysis of evidence.

3. Students will develop written communication skills for presentation of their findings in accordance with established professional guidelines.

4. Students will develop oral communication skills for discussing the scientific method in a laboratory setting and effectively testifying in a court of law.

5. Students will understand the importance of accreditation and certification in the forensic and other science communities.

6. Students will develop an understanding of the importance of the interaction between law enforcement, scientists, and the legal profession.

7. Students will develop an understanding of the importance of professionalism and ethical behavior in the forensic science community.

ETHICS

The profession of criminalistics requires strong ethics and integrity, as does the academic climate at Penn State University.

"Academic dishonesty includes, but is not limited to cheating, plagiarism, facilitating acts of academic dishonesty by others, unauthorized prior possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. A student charged with academic dishonesty will be given oral or written notice by the instructor."
"If students believe they have been falsely accused, they should seek redress through informal discussions with the instructor, department head, dean, or campus executive officer. If the instructor believes that the infraction is sufficiently serious to warrant the referral of the case to the Office of Conduct Standards or if the instructor will award a final grade of F in the course because of the infraction, the student and faculty will be afforded formal due process procedure."

Code of Mutual Respect and Cooperation
For Faculty, Staff and Students in The Eberly College of Science

The Eberly College of Science is a community dedicated to personal and academic excellence. The Code of Mutual respect and Cooperation was developed to embody the values that we hope our faculty, staff, and students possess, consistent with the aspirational goals expressed in the Penn State Principles. The University is strongly committed to freedom of expression, and consequently, the Code does not constitute University or College policy, and is not intended to interfere in any way with an individual’s academic or personal freedoms. We hope, however, that individuals will voluntarily endorse the 12 principles set forth in the Code, thereby helping us make The Eberly College of Science a place where every individual feels respected and valued, as well as challenged and rewarded.

The 12 Principles of the Code are:
1. Treat everyone equally and with respect
2. Be courteous
3. Be ready to communicate
4. Encourage others and share your expertise with them
5. Give and accept constructive criticism
6. Be receptive to change
7. Be a team player
8. Get involved
9. Have a positive attitude
10. Be honest and accept responsibility
11. Recognize other people’s priorities
12. Strive to do your best

1. Treat everyone equally and with respect
Students, staff, and faculty interact with each other frequently in the university environment. Our interactions with each other can create a welcoming and productive atmosphere if we are respectful of others in the same way that we expect others to respect us. As we go about our work, we should recognize that every one has an important part to play in the operation of our university, and therefore it is to our benefit to make the organization work as efficiently as possible. That can only happen if we treat each other respectfully across peer groups and equally within those peer groups.
2. **Be courteous**
   We should remember to show our gratitude for any assistance that we receive from anyone within the university: from the custodians and groundskeepers to the highest academic officers. Friendly greetings and expressions of appreciation will produce a healthier work environment, especially since some of us spend more time at work than we spend at home with our families. It pays to be courteous when we interact with each other.

3. **Be ready to communicate**
   Our work gets done more efficiently if we communicate with each other. Many problems arise because we never talk to each other about things that might not be going smoothly or not working properly. Often we expect that others will know what we are thinking in a given situation. Instead, the opposite is usually true because it is very hard to understand how other people think or feel. So, we need to talk to each other and to make the effort to put ourselves in someone else’s shoes. Our actions will help us to understand how someone else might feel as they react to a specific situation. It is essential that we communicate with each other, when things are going right and especially when things are not going as expected.

4. **Encourage others and share your expertise with them**
   Since we are part of an educational institution, this is the place where we should share our knowledge with each other. We can learn a lot from others even though we may be experts in our own area. So, take a moment to show encouragement to anyone who has just started in your unit or the university, as well as younger people or those at levels below yours. Take a moment to share your enthusiasm for your job and to teach them something new that they can share with others.

5. **Give and accept constructive criticism**
   A “critic” is a person who judges the merits of another person’s work. We can use criticism to congratulate someone on a job that was well done and to describe ways in which other jobs can be accomplished to great satisfaction. We should always be open to such positive comments about our work and willing to learn new ways to improve our work habits. Conversely, persistent negative comments without constructive suggestions for improvement are counterproductive. Constructive criticism is given in the spirit of encouragement when we truly want to help each other to improve; and everyone benefits from this improvement.

6. **Be receptive to change**
   We need to be receptive to change if we truly desire to improve our work performance. As we learn new information, we become different people because we have a broader base of knowledge from which we can view the world. This improved perspective helps us to adapt to new environments and to new coworkers, and enables us to learn even more.

7. **Be a team player**
   Our university is a very big place and yet it can feel like a small place if we work together to achieve our goals. We all depend on each other to make the system work smoothly. For
example, the beautiful gardens cared for by the grounds keepers put us in a happy mood as we make our way to our offices. The custodians make sure that our offices and facilities are clean and healthy for us. The staff assistants process the paperwork so that students can register for the courses that they need, and the faculty can be prepared for their classes. Every part depends on every other part whether or not we recognize those links. So, it is important that we each play our role to the best of our abilities, within our units and as part of the larger family at Penn State.

8. Get involved
As we become more involved in our work, we become more productive and things run more smoothly. Greater involvement in our work environment also results in improved communications between people, especially as we get to know each other better.

9. Have a positive attitude
As we learn and mature, we need to foster a work environment built on positive attitudes. These improved attitudes lead to constructive interactions with others and allow us to learn from them.

10. Be honest and accept responsibility
When things are going well, we are usually happy to take the credit for our successes. And yet, it is very hard to accept responsibility when things do not work out as planned. Our challenge is to be our own toughest critics so we can understand why our efforts resulted in certain outcomes. It takes practice to be able to review our own work, with a positive attitude, and with openness to positive criticism of ourselves. The key is to be honest with ourselves and with others. In an environment where positive criticism is readily given and received, it should be easy to accept responsibility for our actions.

11. Recognize other people’s priorities
As we go about our busy lives, we often forget that we are not the only ones who need to get our work done. We all have to set priorities during the workday, even if each activity takes only a few minutes to complete. So, if we are respectful of others, we need to be patient and wait our turn, especially when making requests of our staff assistants who often have to deal with students and faculty simultaneously.

12. Strive to do your best
Positive interactions with others will enhance our work ethic and make us enjoy our work environment. We will naturally strive to do our best in a professional, constructive, and welcoming atmosphere.
FILING A COMPLAINT OR RAISING PROGRAM CONCERNS

Complaints and concerns from our students are taken very seriously. If you have a complaint or concern directly relating to the instruction provided by the Forensic Science Program, you are encouraged to express that concern at any time to any member of the faculty and staff.

If you do not wish to raise the complaint with the faculty or staff directly involved, you are encouraged to report it to the program Director via email or in person. Your issue will be documented, and the Director will attempt to resolve the complaint to the best of their ability. If it is a faculty or staff complaint, the Director will address the issue with that individual staff or faculty member to find a resolution. Curricular or academic complaints will be handled as makes the most sense, be it during PIM, program meeting, committee meeting, etc. You will be informed when your complaint has been addressed – ie. the staff or faculty member in question was spoken to, the issue was added to a meeting agenda and discussed, etc..

For non-urgent issues or general feedback, you can leave comments on your SRTEs or the Exit Survey taken during your final semester.

If you have a complaint that you wish to raise beyond the confines of the program, you have the right to file a complaint or concern with the University. You can go to https://studentaffairs.psu.edu/support-safety-conduct/support-resources/academic-concern to file a complaint or concern with the relevant department or program at the university. You can also register a general complaint or concern with Student Affairs, https://studentaffairs.psu.edu/support-safety-conduct/victim-survivor-support-advocacy/reporting-options, as well as call the Penn State Hotline (number on the page) to immediately report misconduct concerns. You will find also links for several resources on campus if the complaint is more specific in nature, perhaps having to do with race, gender, sexual orientation, etc.

Eberly College also has at least one ombudsman available within each department to assist students with conflict resolution and to help provide in-person support and resources. You can find the names of the current ombudsmen by searching the Eberly College website. Any of the listed people are fine to approach; you do not have to approach only those from BMB.

REQUIREMENTS FOR ENTRANCE TO MAJOR IN FORENSIC SCIENCE
A freshman entering the Eberly College of Science (ECoS) with an intended major in Forensic Science is initially classified as a pre-major student. In order to enter into the FRNSC major, you must meet the following requirements:

Minimum GPA of 2.0
3rd Semester Classification
C or better grades in: MATH 140, CHEM 110, CHEM 111, CHEM 112 and FRNSC 210

ADVANCED PLACEMENT (AP) CREDITS FOR FORENSIC SCIENCE

For information regarding AP credits for the Forensic Science Program, refer to the Undergraduate Admissions website at [www.admissions.psu.edu](http://www.admissions.psu.edu)

TAKING COURSES AT OTHER INSTITUTIONS

Earning credits at a college or university other than Penn State is possible while you are a student enrolled at Penn State. **BEFORE** enrolling in course work at another school, be sure to receive prior approval by: 1) checking the Transfer Credits Tool through the Admissions Office to see whether the credits earned at College are transferable to Penn State ([https://admissions.psu.edu/my_admissions/tas/](https://admissions.psu.edu/my_admissions/tas/)), and 2) Students should consult with their academic adviser to verify how the credits would be applied towards their degree requirements and 3) for any science course not directly transferable as a specific PSU course, consulting with the appropriate authority in each department to determine whether the course transfers as a substitution for required courses in the Forensic Science curriculum. To determine if courses from another institution will be transferable, students must: a) obtain a copy of the most recent course syllabus (contact the host institution for this) and; b) set up a meeting with your adviser in Ritenour Building.

Transfer Credits: Note that for the baccalaureate degree at least 36 of the last 60 credits must be earned in courses offered by Penn State or in cooperative degree programs that have been established by formal agreement and approved by the University Faculty Senate.

TRANSFER CREDITS

Courses taken at other accredited colleges and universities, including foreign institutions, may be transferred to Penn State provided that a grade of a C or better was earned. Credits will be transferred either as a specific Penn State course (i.e. ENGL 15, PSYCH 100, etc.), or as general credit (i.e. CHEM GEN). This means that the credits will count toward your graduation. However, unless courses transferred as GEN are evaluated, all GEN courses acceptable to the major will be counted as elective credits only (courses listed as GEN may not
have an exact Penn State equivalent; therefore, they must be evaluated course by course. Items necessary for GEN course evaluation vary by Department. Students should work with their academic advisor to ensure they have proper documentation for each course to be evaluated and that the information is directed to the appropriate person for evaluation.

GENERAL EDUCATION
(BACCALAUREATE DEGREE CANDIDATES)

General education requirements totaling 46 credits fall in eight areas:

*Writing/Speaking 9 credits in courses designated with GWS suffix
*Quantification 6 credits in courses designated with GQ suffix
*Health & Physical Activity 3 credits in courses with a GHS, GPE, or GHA suffix
*Natural Sciences 8 credits in courses designated with GN suffix
*Arts 6 credits in courses designated with GA suffix
*Humanities 6 credits in courses designated with GH suffix
*Social & Behavioral Sciences 6 credits in courses designated with a GH suffix
*Freshman Seminar 1 credit of PSU 016 or another Freshman Seminar

Under certain circumstances (e.g., pursuit of a double major or a minor degree in addition to a major degree, transfer from another institution, etc.), students are encouraged to develop a sequence of 9 credits in either the arts, humanities, or social and behavioral sciences by substituting 3 credits from one of the other two areas not in the students’ major field of study. Consult with an advisor in Ritenour Building to obtain approval for this alternative distribution of general education credits. For more information regarding General Education courses, please refer to the following website:
http://bulletins.psu.edu/bulletins/bluebook/general_education.cfm?section=generalEd1

For the suggested course sequence in the forensic science major, please see the 4 year schedule for both the biology and the chemistry tracks on our website:
http://forensics.psu.edu

WRITING REQUIREMENT IN FORENSIC SCIENCE
All students must complete at least three credits of writing-intensive courses prior to graduation. This requirement will be met once you complete forensic science courses: FRNSC 421W or FRNSC 427W.

**DISALLOWED COURSES**

The following courses **MAY NOT** be used for credit (**NOT EVEN AS ELECTIVES**) towards a degree in Forensic Science and will **NOT** be counted towards graduation:

ASTRO 001, 010, 011, 120, 130, 140  
BMB 001, 211, 212, 221  
CMPSC 011, 100  
ESL 004  
MATH 001, 002, 003, 004, 017, 018, 021, 022, 026, 030, 035-037, 040, 041, 081-083, 110, 111, 200, and only 4 cr of 140A  
BI SC 001, 002, 003, 004  
CHEM 1, 2, 6, 11, 34, 35, 102 & 3 cr of 017  
ENGL 004, 005  
LL ED 005, 010  
MICRB 106, 107, 150, 151  
PH SC 007  
PHYS 001, 150, 151  
STAT 100

**COURSE DROPS**

During the free drop/add period at the start of each semester, students can adjust their schedule with no fee and without any indication on their transcript. After the free drop/add period, any course can be dropped until the late drop deadline as long as the following conditions apply:

- The student has not been sanctioned for academic integrity issues.

The late drop deadline is during the 12th week of the semester. Students are reminded to **CHECK the official University calendar each semester for late drop deadline** ([www.registrar.psu.edu](http://www.registrar.psu.edu) and click on “Academic Calendars.”)

**Here is a summary of some important drop/add information.** The free drop/add period varies from semester to semester. The free drop/add period is the first 5 days of classes.

**The late drop deadline varies WITHIN a semester for some classes.** In particular, classes that have different start and end dates and for summer classes with different start and end dates, the late drop deadline is **NOT** the same as for other classes. If you have a class that has a variable start and end date, it is **VERY** important that you investigate when the drop deadline is as indicated on your course syllabus or through LionPATH.
UNDERGRADUATE RESEARCH IN FORENSIC SCIENCE

Participation in research projects provide students with an opportunity to combine classroom knowledge with practical applications of science through hands-on experience and numerous undergraduates make research an essential part of their collegiate education. Research with a forensic science member can be scheduled for 294/494 credit. Please contact your advisor or a faculty member for possible research opportunities.

SUMMER UNDERGRADUATE RESEARCH

- Why participate in a summer research?
- It is a full-time position (6-12 weeks) that will boost your resume.
- You will earn money, **and** housing is included!
- Some programs provide allowances for meals, and related travel.
- You will meet new people, and expand your network.
- You will develop presentation experience by participating in a symposium.
- It is great for your career and professional development, and provides social opportunities as well.
- It will be a fun and fulfilling experience!

Summer undergraduate research provides an excellent opportunity to conduct research at other institutions. It will take some searching to find the perfect opportunity. Explore the helpful links on the right to start your search. You are encouraged to develop some of your own strategies. For more information, Email Dr. Tomalei Vess | tjv4@psu.edu. This opportunity may not be related to the Forensic Science Program.

CO-OP EXPERIENCE

A co-op is an academic program in which students earn credit for 2+ semesters of employment related to their majors.

Co-op experiences are typically two semesters long (Summer+Fall or Spring+Summer). Students are registered for 1-3 credits of SC295 during the first semester and 1-3 credits SC395 during their second. Students should talk to their academic adviser to determine the best way to use the credit. Depending on major, co-op courses may fulfill practicum or elective degree requirements.

Co-ops are full-time jobs; typically students work 40 hours/week for the duration of the experience. Because co-ops are full-time academic experiences, students participating in co-ops
remain full-time Penn State students, though they are only registered (and pay) for 1-3 credits/semester.

Students are paid for their experiences - employers determine the rate of pay based on the job and level of skill.

Students participating in the co-op program get a transcript notation and eligibility to take English 202C by portfolio. (http://science.psu.edu/cie/co-op/).

Eligibility for Co-op:

- Completion of at least 30 credits, 2.0 overall grade point average
- Enrollment in one of the following:
  - all science majors at all Penn State locations are eligible
  - a science-oriented major (ex. Forensic Science, Toxicology, Immunology, Animal Bioscience, Biobehavioral Health, etc.).

If you are interested in participating contact the Office of Science Engagement.
http://science.psu.edu/cie.

**INTERNSHIP PROGRAM**

Internships may or may not earn academic credit, so part of your planning will be determined by whether or not you would like to earn academic credit for your experience. Note: some internship programs (particularly unpaid internships) require students to be registered for academic credit while participating in the internship experience.

Here are a few things you can do in advance if you'd like to apply for an internship:

- Ask a forensic science faculty member if they know of an internship program in a crime lab or other forensic science laboratory near the area where you would like the internship. Most internships are not paid, but there may be a few that are paid.
- Keep up with the FRNSC Undergraduate Listserv for announcements of internship opportunities.
- Know what you want to gain from your internship experience. What do you want to learn more about? What type of experience do you want to have?
- Internship credits are arranged by the Office for Science Engagements. For assistance in registering for credit, see www.science.psu.edu/cie/internship.

**STUDY ABROAD**
Would you be interested in experiencing another culture? *Participate in field research?* Try out a different academic system?

Our goal is to have all science majors graduate from Penn State with a more global perspective, because no matter where you go from here, you will be working and interacting with people from a wide range of backgrounds. Please be aware that going to study abroad may result in being off-track for graduating in four years. For additional information on what is offered go to [www.science.psu.edu/cie/education-abroad](http://www.science.psu.edu/cie/education-abroad).

### FORENSIC SCIENCE INTEREST HOUSE

Students with an interest in forensic science may choose this Special Living Option (SLO). Students will live and learn with classmates who share their interests. Students live with other members of their SLO in close-knit communities ("houses") located in the residence halls where they have the opportunity to participate in field trips, group dinners, and other social and educational activities. Students build strong relationships with their fellow residents—and with the faculty and staff members affiliated with their SLO. In your SLO, learning isn't just encouraged—it's celebrated! Visit [http://housing.psu.edu/special-living-options](http://housing.psu.edu/special-living-options) for more information.

### FORENSIC SCIENCE CLUB

The Penn State Forensic Science Club is open to any student who is interested in forensic science. The goal of the club is to stimulate career interests and to promote good relations among club members. Organized field trips, guest speakers and other special events are ongoing activities that bring the club toward its goal. Members are expected to attend club meetings and to participate in various events. [http://forensics.psu.edu/undergraduate/student-organizations](http://forensics.psu.edu/undergraduate/student-organizations)

### GRADUATION REQUIREMENTS

**BEFORE BEGINNING** your final semester, pull a degree audit and then check with your advisor to confirm that you will have: a) accumulated the minimum number of 124-126 credits and; b) fulfilled all coursework requirements for your academic program year including 1) at least a C (2.00) cumulative grade point average for all courses taken at the University, 2) a grade of C or better in *required* courses, 3) have met all general education requirements, and 4) fulfilled the First Year Seminar requirement.
As indicated above, 124-126 credits are required to graduate with a B.S. in Forensic Science. Be sure to add these credits carefully. Be sure you keep an up-to-date log on the number of ACCEPTABLE credits you have earned. Use the CHECK SHEETS for this purpose. Suggestion: Add the credits of each course taken, and do NOT count remedial courses (or partial remedial credits or courses that you repeated). If you have any questions about this, consult with your advisor.

Realize also that the last 60 credits required for the baccalaureate degree must be completed within the total elapsed time of five calendar years (however, an extension of time shall be granted for intervening military services). Moreover, at least 36 of the last 60 credits required for the degree must be completed in courses offered by the University or in cooperative degree programs that have been approved by the University Faculty Senate.

We request that you advise us the semester before you intend to graduate so we can be sure things are in place for you. **It is your responsibility to notify the University of your intent to graduate!** Confirm the activation period on the Academic Calendar for the dates when you can activate your intent to graduate. Using the “Activate Graduation” application on LionPATH, you can set or remove your intent. After the activation period expires, you must contact Lynne O’Cain in the Eberly College of Science at lmo11@psu.edu or by calling 863-8467 to activate or remove your intent to graduate.

**FREQUENTLY ASKED QUESTIONS**

**What classes should I take in high school to prepare myself for this major?**

Science and mathematics courses will be the best preparation for students who are interested in the forensic science major. Biology, physics, chemistry, anatomy, and physiology courses provide a strong foundation for students interested in this course of study. Algebra, advanced algebra, trigonometry, statistics, and pre-calculus also provide excellent preparation. When available, advanced placement (AP) science, mathematics courses, and calculus courses are also strongly recommended.

**How do I apply to the Forensic Science Undergraduate Program?**

Applying to the Forensic Science Program can be done through the Undergraduate Admissions application. Go to [www.admissions.psu.edu](http://www.admissions.psu.edu). You will choose forensic science as your preference. Once you complete the entrance to major requirements you actually enter the major.

**Will this major be offered at Penn State campus locations other than University Park?**

The Forensic Science program participate in the 2+2 program through Penn State. This means that students are able to spend their first 2 years of the major at one of Penn State’s
Commonwealth Campuses and then come to University Park to finish their degree for their last 2 years. The Forensic Science program is a University Park finish major. Students may start the degree at any Penn State Campus and then come to University Park to complete their degree. Students who start at a non-UP campus, may request a Change of Campus Assignment using LIONPATH in consultation with their assigned academic adviser at the Campus.

What are the entrance to major (ETM) requirements?

In order to enter into the FRNSC major, you must meet the following requirements: Complete CHEM 110, CHEM 111, CHEM 112, MATH 140 and FRNSC 210 with a C or better.

May I double major in forensic science and another major?

Eberly College of Science students seeking to obtain concurrent majors request approval to do so by the departments and the Dean of the Eberly College of Science. Go to faculty senate policy 60-10 at [http://senate.psu.edu/policies-and-rules-for-undergraduate-students/](http://senate.psu.edu/policies-and-rules-for-undergraduate-students/). Eberly College of Science students may not concurrently enroll in a general science major (either Science BS or Pre-medicine) and another Eberly College of Science major degree program. Approval for all other concurrent major requests by Eberly College of Science students will be made only when there are at least 18 credit hours of unique coursework for each major.

What career opportunities are available to me with a forensic science undergraduate degree?

There are many career opportunities for graduates with a forensic science degree from Penn State. Graduates of this major could pursue employment as a scientist in a federal, state, county, city or private crime laboratory in public or private toxicology or other science (Pharmaceutical, biotechnology, particle analysis, etc.) laboratories with insurance companies, intelligence or homeland security agencies, scientific supply companies, or the judicial community. One could also choose to pursue graduate study in criminalistics or forensic science, forensic DNA analysis, forensics chemistry, molecular biology, chemistry, or toxicology or, attend medical or law school.