This workshop, hosted by the Molecular Sciences Software Institute (MolSSI), provides training on Python programming for chemists. The course will start with fundamentals of Python and representation of molecules on computers, and will culminate in a case study where Python is used for molecular docking applications.

**About the Course:** This course by the Molecular Sciences Software Institute (MolSSI) teaches users fundamentals of Python programming, programmatic representation of molecules, and computational molecular science calculations. Some basic knowledge of Python such as syntax rules and logic is beneficial, but not necessary for this course.

**What You Will Learn:**
- Basic Python Syntax and Control Structures.
- Python environments such as JupyterLab.
- Molecular representation using SMILES and molecular file formats.
- Molecule manipulation with RDKit.
- Accessing Chemical Data from online databases like PubChem and the Protein Data Bank.
- Introduction to software for molecular docking using Python.

**Identifying Science Mentors with the SACNAS Network: Advancing & Transforming Higher Ed Life**

(9:00 am - 10:30 am)

This workshop allows attendees to explore concepts and best practices needed to succeed in business leadership roles in the chemical sciences. The Prerequisite for this course is Preparing for Business Leadership, an self-paced, on-demand introductory course available free of charge through the ACS Institute.

**About the Workshop**
Navigating Dynamic Commercial Organizations is a live, in-depth look at best practices in business leadership that assists scientists in transitioning into business leadership roles in the industry. The facilitated workshop builds on the concepts and skills introduced in the online modules, providing additional detail and training to succeed in a corporate environment.

**What You Will Learn**
- Demonstrate understanding of the skills and responsibilities used by business leaders in the chemical sciences.
- Illustrate how understanding and honing these skills and responsibilities can instill confidence and promote professional success in a commercial scientific organization using real world scenarios.
- Use case scenarios and activities to decide how a business leader’s skills and responsibilities are applied to assess common situations in a commercial scientific organization.
- Transfer learned skills and responsibilities to a personal scenario that a business leader may theoretically encounter on a professional journey.
Finding Yourself: Identifying a Career that Matches Your Strengths and Values

(2:00 pm - 5:00 pm)

This course provides self-assessment tools to identify career values and strengths. Participants will compare and contrast the four sectors of chemistry employment to determine which sector best aligns with their values and strengths. This data will then be used to create a targeted job search strategy. Key topics include how to:

- Identify and describe your values and strengths in terms of employability
- Compare and contrast job market outlook and skills in industry, academia, government, and self-employment sectors
- Understand the purposes of networking
- Apply questioning strategies to engage in effective networking

This is part of a two-part series on Finding Yourself.

What You Will Learn: After completion of the course, attendees will be able to:

- Identify employability strengths
- Plan a career and job search based on self-assessment
- Articulate and assess personal values and strengths
- Understand employment pathways
- Research jobs by Education and Sector
October 24, 2024

Chemical Patents Workshop: Intellectual Property (IP) for Chemists
(8:00 am - 11:30 am)

Discover the importance and connectivity of intellectual property, innovation and entrepreneurship. Join us for an enlightening workshop where we delve into different types of intellectual property. Ready to learn everything about Patents. The workshop provides means for helping companies understand the importance of protecting their intellectual property. Join us and pave the way to your dream career into intellectual property law.

About the Workshop: In this intensive patent workshop, participant will gain invaluable insights into protecting the ideas/inventions, documenting ideas, conducting prior art search, deciding the type of intellectual property coverage is needed, patents, trademarks, drafting and filing patent application, patent prosecution, getting the patent granted, value and importance of a patent, maintaining a patent, international patent application (foreign patent), how to read a patent, and pro bono patent program to help financially under-resourced independent inventors and small businesses.

What You Will Learn: Attendees of this workshop will learn, gain insights into the knowledge, resources and walk away with the comprehensive understanding of the following:

- Invention Disclosure
- Types of Intellectual Property
- Prior Art Search
- Patents
- Types of Patents
- Patent Claims
- Inventorship
- Patenting Process
- Patent Prosecution
- Value of a Patent
- PCT International Application (Worldwide coverage)
- Trademarks
- How to Read a Patent
- Career in Intellectual Property
- Pro Bono Patent Program

Acing the Interview: Setting Yourself Up for Success in an Interview
(9:00 am - 11:00 am)

This interactive practical course dissects the interview process and presents it in easily navigable stages. Participants will learn to prepare for multiple types of interviews including screening interviews, intermediate interviews, on-site, and remote interviews. Job announcements will also be analyzed to identify critical performance factors. The course will help interviewees develop a strategic job search plan to locate employers and positions that correspond with their experience and values. Key topics include:

- Identifying stages of the interview processes
- Preparing for any type of interview
• Determining key skills required for a position
This is part of a two-part series. You can review the companion course: Acing the Interview: Making the Most of Your Interview: Outshine the Competition.

What You Will Learn: After completion of the course, attendees will be able to:
• Break down the interview process into steps
• Understand communication at each step
• Promote themselves effectively for specific positions

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**Networking: How to Get Started**  
(2:00 pm - 3:00 pm)

This course will help participants develop networking skills to enhance their job search and enlarge their professional networks to promote career advancement. Participants will analyze and practice communication techniques that create a natural flow in networking conversations and meet networking goals. The course concludes with instruction in creating a networking plan geared towards obtaining work in the federal government. Course objectives include:
- Using networking to achieve career goals
- Identifying networking questions types
- Practicing strategies for effective networking

This is part of a two-part series on Finding Yourself.

**What You Will Learn:** After completion of the course, attendees will be able to:
- Plan networking opportunities to get hired
- Use networking to launch a chemistry career that corresponds with their values and strengths
- Network to identify promotions, opportunities for job changes, and award eligibility
October 25, 2024

Accessible Science Communication: How to “Center the Edges”
(9:00 am - 11:00 am)
The term “accessibility” is commonly misunderstood. Some people assume that making science content more accessible requires a high level of coding or developer skills, or is just too time-consuming to take on. Learn how you can make your science communication more accessible to all, especially people with disabilities.

About the Workshop: Making science communication accessible positively impacts everyone – regardless of disability status. But very frequently, work, software, and applications are designed for a so-called “average” user at the center, which makes it incredibly difficult (or in some cases impossible), to remediate and improve accessibility afterwards. This presentation will focus on how accessibility benefits us all and will share simple and practical steps that scientists and science communicators can take to improve accessibility in posters, oral presentations, and even social media. Expect to leave this presentation with skills that you can implement for your very next talk or science post. By designing and creating work with the edges in mind, rather than designing for the average, we can create a chemistry community that truly includes everyone.

What you will Learn:
Attendees will learn the following:

• The importance of alternative text for images and other non-text content; how to write alt text
• How to use color with accessibility in mind
• How to use more than color to convey information
• What color contrast is, how to measure it, and ways to improve it
• Ways to adjust color scales (e.g., heat maps) that are mindful of people with different forms of color blindness
• Ways to present your work with multiple disabilities in mind

Acing the Interview: Setting Yourself up for Success in an Interview
(9:00 am - 11:00 am)
This interactive practical course dissects the interview process and presents it in easily navigable stages. Participants will learn to prepare for multiple types of interviews including screening interviews, intermediate interviews, on-site, and remote interviews. Job announcements will also be analyzed to identify critical performance factors. The course will help interviewees develop a strategic job search plan to locate employers and positions that correspond with their experience and values. Key topics include:

• Identifying stages of the interview processes
• Preparing for any type of interview
• Determining key skills required for a position

This is part of a two-part series. You can review the companion course: Acing the Interview: Making the Most of Your Interview: Outshine the Competition.

What You Will Learn: After completion of the course, attendees will be able to:

• Break down the interview process into steps
• Understand communication at each step
Promote themselves effectively for specific positions

Chemistry at Merck Workshop
(2:00 am - 4:00 am)
Ever wonder what a career in chemistry at Merck is about? Come see real world examples of applying chemistry to solve challenges in the drug discovery process. After the series of vignettes, we plan to highlight a typical hiring process, offer tips, and answer questions.

About the Workshop: The “Chemistry at Merck” workshop aims to introduce the audience to several careers within Merck that leverage a chemistry background. We will highlight medicinal, computational, peptide, process, and analytical chemistries and highlight some impact of their applications within drug discovery.
What You Will Learn: You will learn about Merck, Merck chemistry, and general career opportunities at Merck as well as tips in the hiring process.

Improving Communication in Chemistry for a More Inclusive Community
(2:00 pm - 4:00 pm)
Attendees will be immersed in innovative communication of science through American Sign Language (ASL) for chemistry and receive an update on the Braille Chemistry Code revisions. In addition, a fascinating project that employs Artificial Intelligence to enable ASL communication will be discussed. This workshop embraces diversity and inclusion for all members of the scientific community. Join us as we pave the way toward celebrating chemistry through communication!

About the Workshop: Participants will learn how to actively make chemical communication more inclusive. One of the channels to be discussed is American Sign Language, specifically for chemists who are Deaf/Hard of Hearing (DHH). A set of signs for chemistry concepts has been developed and will be discussed. Furthermore, the theory and process for establishing signs, as well as chemistry-related signs videos, will be displayed. Updates to the Braille Chemistry Code will also be presented. Additionally, Artificial Intelligence is introduced as a means of incorporating robots into education settings for both deaf and hearing communities. The main idea of the project is to utilize robotic teachers to teach sign language and expand to the chemistry realm. The workshop is open to all participants.

What You Will Learn: Participants will leave the workshop having learned:
• The importance of inclusion in scientific communication
• American Sign Language applied to the chemical environment as a tool for communication and inclusion.
• ASL signs for chemical concepts
• Artificial Intelligence applied to communication via American Sign Language
• Updates to the Braille project
• How can we make the scientific community more inclusive

Networking: How to Get Started Workshop
(2:00 pm - 3:00 pm)
This course will help participants develop networking skills to enhance their job search and enlarge their professional networks to promote career advancement. Participants will analyze and practice communication techniques that create a natural flow in networking conversations and meet networking goals. The course concludes with instruction in creating a networking plan geared towards obtaining work in the federal government. Course objectives include:
• Using networking to achieve career goals
• Identifying networking questions types
• Practicing strategies for effective networking
This is part of a two-part series on Finding Yourself.

What You Will Learn: After completion of the course, attendees will be able to:
• Plan networking opportunities to get hired
• Use networking to launch a chemistry career that corresponds with their values and strengths
• Network to identify promotions, opportunities for job changes, and award eligibility

October 26, 2024

K-12 Teachers Workshop
(10:30 am - 3:30 pm)

Implementing Active Learning in General Chemistry Courses Workshop
(8:30 am - 12:00 pm)

Have you been teaching general chemistry for so long that you’re starting to bore yourself? Invigorate your teaching and your students by introducing active learning components into your course. This interactive workshop is designed to support chemistry professors in effectively implementing active learning strategies in their general chemistry courses. Participants will explore a variety of active learning techniques and learn how to adapt them to their specific teaching contexts. The workshop will also address common challenges associated with active learning and provide guidance on designing engaging and effective learning experiences.

About the Workshop: Workshop facilitators will provide an overview of methods for introducing active learning into your courses. These methods include think-pair-share, flipped classroom strategies, introducing jigsaw activities, and other methods to provide students with more agency in learning. Workshop participants will have a chance to practice these methods as part of the workshop. Participants will leave the workshop with a deeper understanding of active learning and a toolkit of practical strategies for integrating it into their general chemistry courses. They will also have the opportunity to network with other chemistry instructors and build a supportive community of practice.

What You Will Learn: By the end of this workshop, participants will be able to:
• Define active learning and articulate its benefits for student engagement and learning outcomes.
• Select and implement a variety of active learning strategies, including think-pair-share, jigsaw, and inquiry-based learning.
• Design active learning activities that promote student collaboration, critical thinking, and problem-solving skills.
• Assess the effectiveness of active learning implementation and adjust as needed.

Digital Alchemy: The Fusion of Chemistry and Computing?
(8:30 am - 11:30 am)

Join us for an insightful workshop on the intersection of computational chemistry and drug discovery!

About the Workshop: This workshop offers a comprehensive introduction to computational chemistry and its application in drug discovery. Participants will explore various tools used in computer-aided drug design, gaining hands-on experience with cutting-edge software and techniques. In addition, we will explore the usage of AI in health care system. In addition, we will explore the use of AI in the healthcare system, with a particular focus on its application in drug discovery. Participants will gain insights into how AI can accelerate the drug development process, identify potential drug candidates, and optimize
clinical trials. We will also discuss real-world applications and case studies showcasing the transformative impact of AI on drug discovery and development, highlighting its role in making the process more efficient and cost-effective.

**What You Will Learn:** The application of AI in healthcare research
- Utilizing virtual reality (VR) technology in research
- Practical skills in molecular modeling and simulation
- Insights into the latest trends and advancements in computational chemistry

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**Local Section Activities Workshop**

(1:30 pm - 5:00 pm)

In this session, representatives from Local Sections in the Southeastern Region of the American Chemical Society will share their successful programming to encourage others to further engage members and the public in promoting the chemical enterprise. We encourage submissions from a variety of local sections: large, small, rural, urban. Presenters will be asked to provide a web resource with the "nuts and bolts" of how to plan and execute their activities.

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**Career Pathways in Pharmacy Workshop**

(1:00 pm - 5:00 pm)

Discover the diverse avenues awaiting you in the world of pharmacy. From clinical roles to research opportunities, join us for an enlightening workshop where we delve into the myriad career pathways available in this dynamic field. Ready to chart your course to success? Join us and pave the way to your dream career in pharmacy!

**About the Course:** In this immersive workshop, participants will gain invaluable insights into the multifaceted landscape of pharmacy careers. Through engaging presentations and interactive discussions led by industry and academic experts, attendees will explore a wide array of career paths, including clinical pharmacy, pharmaceutical research, healthcare administration, and more. Whether you're a seasoned professional seeking new horizons or a student contemplating your future in pharmacy, this workshop will provide the knowledge and resources to navigate your career journey with confidence. Join us as we uncover the possibilities and unlock the potential of your pharmacy career!

**What You Will Learn:** Attendees of this workshop will walk away with a
- Comprehensive understanding of the various career pathways available within the field of pharmacy.
- Learn about the roles and responsibilities associated with different sectors, including clinical pharmacy, pharmaceutical research, industry regulations, and healthcare management.
- Gain insights into the skills and qualifications required for each career path, as well as the current trends and opportunities shaping the pharmacy profession.
- The knowledge and resources to make informed decisions about their future career endeavors in pharmacy.

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**Chemistry Trivia for Undergraduate Student Chapters**

Whether you're a seasoned scientist or just a curious molecule, this event promises to spark your curiosity and bond you with fellow enthusiasts. Bring your friends and form a compound or come as a single ion to ready to form bonds with new friends. Join the Chapter Advisors of Georgia Gwinnett College and Augusta University for “Picture Perfect Trivia.”

**About the Workshop**

Whether you're a seasoned scientist or just a curious molecule, this event promises to spark your curiosity and bond you with fellow enthusiasts. Bring your friends and form a compound or come as a single ion to ready to form bonds with new friends. Join the Chapter Advisors of Georgia Gwinnett College and Augusta University for “Picture Perfect Trivia.” The trivia is not just about facts and chemical formulas but will explore the many ways that chemistry is woven into everyday lives. You can expect questions from many of the disciplines of chemistry, including green chemistry. You might also see questions
about the National Chemistry Week theme of “Picture Perfect Chemistry: Photography and Imaging” or the SERMACS host city of Atlanta, Georgia.

**What You Will Learn**

- Participants will test their knowledge and learn aspects of different areas of chemistry, including questions around the theme of National Chemistry Week of Picture-Perfect Chemistry and Green Chemistry.
- Participants learn about the SERMACS host city of Atlanta, Georgia.
- Participants learn how to network and have fun with individuals of different scientific backgrounds.