

# Findings

## *Learning Inventory Survey*

### **Full Results by Record**

#### **Division Track at Leadership Institute**

To prepare ACS Technical Division Officers to be successful in the roles.

Skills: Business and Management Acumen, Communications, Leadership

Audience: Volunteer leader, ACS members

Governance Oversight: Yes: DAC

Frequency: Once a year

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 21-40

Cost: Free for ACS Members

## **Graduate School: The Ins & Outs of Getting In**

Learn about types of graduate school programs, the application process, and whether grad school is right for your career goals.

Skills: Communications, Career/education planning

Audience: Undergraduate student

Governance Oversight: Yes: SOCED

Frequency: Other: 2x a year (at each national meeting)

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 41+

Cost: No

## **The Graduate School Experience: What to Expect**

Learn the trajectory of different types of graduate programs and what is needed to get the most out of them.

Skills: Career/education planning

Audience: Undergraduate student

Governance Oversight: Yes: SOCED

Frequency: Other:2x year (each national meeting)

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 41+

Cost: No

## **Writing a Competitive Research Grant**

To provide advice and guidance on writing research grant proposals

Skills: Business and Management Acumen, Technical Skills, Lab Safety, Communications, Innovation and Creativity, Technical Review and Writing

Audience: High school teacher, Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Volunteer leader, ACS members, Early-Career

Governance Oversight: No

Frequency: As needed

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: Yes, We do do the program in both webinar and face to face

Assessment: Yes

Evaluation: Yes

Participants per instance: 41+

Cost: No

## **Festival Training Institute**

The main goal of these international, regional events is to teach volunteers how to organize, execute, and obtain funding for hands-on science outreach events.

Skills: Communications, Leadership, Global Mindset, Approaches to Chemistry Teaching and Learning

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Once a year

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 5-10

Cost: No

## **Analyzing Hazards and Risks in High School Chemistry Labs**

To explore examples and applications of the four principles of safety: Recognize the hazard; Analyze the risk of the hazard; Mitigate the risk; and Prepare for emergencies, as well as show examples on how to integrate RAMP into high school lab activities.

Skills: Lab Safety

Audience: High school teacher

Governance Oversight: No

Frequency: Other: Three times a year at the NSTA regional conferences.

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 11-20

Cost: No

## **ACS Outreach Training Program**

To satisfy the ACS Committee on Community Activities Vision, Mission, and Strategic Goal of providing training and guidance for volunteers to increase number of local sections running outreach activities, events and reporting results.

Skills: Communications, Approaches to Chemistry Teaching and Learning, Science Outreach

Audience: Volunteer leader, ACS members

Governance Oversight: Yes: CCA

Frequency: Other: At regional meetings and digitally

Format: Hybrid, online and face-to-face

Length of each instance: Other: In person will be half day workshops, online will be hour long webinars

Follow up: Yes

Assessment: No

Evaluation: No

Participants per instance: 21-40

Cost: No, Free for ACS Members

## Laboratory Safety

In this interactive session ( the audience submits the written questions and panel of speakers responds) the following topics are explored:

What safety skills transfer from the academic laboratory to chemistry work in other sectors?

How does the institutional setting (national lab vs. research university vs. primarily undergraduate institution) impact the style and substance of a safety program?

What are the key information resources that safety professionals rely upon to help chemists™s perform chemistry safely?

How can chemists and other scientists find a career in chemical safety?

Skills: Lab Safety

Audience: ACS members

Governance Oversight: No

Frequency: Other:there were four lab safety webinar in 2018

Format: Webinar

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 41+

Cost: No



## **Laboratory Safety**

Developing Graduate Student Leadership Skills in Laboratory Safety

Skills: Lab Safety

Audience: Graduate Student

Governance Oversight: No

Frequency: Other: Twice a year at the National Meetings

Format: Face-to-face

Length of each instance: 90 min to <4 hrs

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 21-40

Cost: Yes

## **AACT Webinars**

AACT presents webinars on a variety of K-12 chemistry teaching topics during the school year. During the 2018 calendar year, we presented 22 webinars with a registration of 4588 and attendance of 1975.

Skills: Lab Safety, Innovation and Creativity, Chemistry Content Knowledge, Teaching Methods and Resources for K-12 Teachers of Chemistry

Audience: High school teacher, K-8 teachers of chemistry

Governance Oversight: Yes: SOCED

Frequency: Other: Two to three webinars per month during the school year.

Format: Webinar

Length of each instance: Other: 60 minutes

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 41+

Cost: No

## **ACS High School Day of Chemistry at NSTA Regional Meetings**

The ACS High School Day of Chemistry at NSTA Regional Meeting is a series of four workshops on related topics that are presented consecutively. The theme for the past two years is relating structure and properties of ionic and covalent substances.

Skills: Chemistry Content Knowledge

Audience: High school teacher

Governance Oversight: Yes: SOCED

Frequency: Other: We attend the three regional conferences in the fall and present four one hour presentations.

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 41+

Cost: Yes

## **AACT workshops**

Presenting workshops on a variety of topics to help K-12 teachers of chemistry.

Skills: Lab Safety, Chemistry Content Knowledge

Audience: High school teacher, K-8 teachers of chemistry

Governance Oversight: Yes: SOCED

Frequency: Other: During 2018 we attended six local, regional, or national conferences. In total, we presented 28 workshops that were attended by a total of 830 people.

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No,

Assessment: No

Evaluation: Yes

Participants per instance: 21-40

Cost: Yes

## **ACS Professional Education**

ACS Professional Education offers a variety of courses designed to keep chemical scientists and technicians keep current in today's competitive marketplace.

Skills: Business and Management Acumen, Technical Skills, Lab Safety, Communications, Leadership, Technical Review and Writing

Audience: Industry/government chemist, ACS members, Early-Career, Mid-Career

Governance Oversight: No

Frequency: Other: Multiple various times--not on any set frequency

Format: Face-to-face

Length of each instance: 90 min to <4 hrs

Follow up: Yes, only online and on a case-by-case basis

Assessment: Yes

Evaluation: Yes

Participants per instance: 5-10

Cost: Yes

## **ACS Professional Education**

ACS Professional Education offers a variety of courses designed to keep chemical scientists and technicians keep current in today's competitive marketplace.

Skills: Business and Management Acumen, Technical Skills, Lab Safety, Communications, Technical Review and Writing

Audience: Faculty, Industry, government chemist, ACS members, Early-Career, Mid-Career

Governance Oversight: No

Frequency: Other:12 times a year

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: No

Assessment: Yes

Evaluation: Yes

Participants per instance: 5-10

Cost: Yes

## **ACS Professional Education**

ACS Professional Education offers a variety of courses designed to keep chemical scientists and technicians keep current in today's competitive marketplace.

Skills: Technical Skills, Communications, Innovation and Creativity, Technical Review and Writing

Audience: Faculty, Industry/government chemist, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Quarterly

Format: Online, non-webinar

Length of each instance: 30 to <90 minutes

Follow up: Yes, Online communication up to 30 days post program

Assessment: Yes

Evaluation: Yes

Participants per instance: 5-10

Cost: Yes

## **ACS Professional Education**

ACS Professional Education offers a variety of courses designed to keep chemical scientists and technicians keep current in today's competitive marketplace.

Skills: Business and Management Acumen, Technical Skills, Communications, Innovation and Creativity, Change and Risk Management

Audience: Faculty, Industry, government chemist, ACS members, Early-Career, Mid-Career

Governance Oversight: No

Frequency: As needed

Format: On-demand, web-based

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 5-10

Cost: Yes



## **Middle School Chemistry Day at NSTA**

Introduce teachers to ACS's free standards-based lesson plans for teaching middle school chemistry and help teachers better understand basic chemistry concepts appropriate for middle school.

Skills: Chemistry Content Knowledge, Approaches to Chemistry Teaching and Learning

Audience: Middle school teachers

Governance Oversight: Yes: SOCED

Frequency: Other: 4 times

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No,

Assessment: No

Evaluation: Yes

Participants per instance: 41+

Cost: No

## **Inquiry in Action**

Introduce teachers to the free standards-based lesson plans in inquiry in Action, and help teachers learn basic chemistry concepts appropriate for K-5th grade.

Skills: Chemistry Content Knowledge, Approaches to Chemistry Teaching and Learning

Audience: Elementary school teacher

Governance Oversight: Yes: SOCED

Frequency: Other: 4 times

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 21-40

Cost: No

## **ACS Reviewer Lab**

This free online course focuses on helping researchers learn best practices for delivering thoughtful, high-quality peer review. It uses self-paced modules with video materials and quizzes to provide guidance on identifying the core criteria for evaluating manuscripts, writing a helpful review, and navigating difficult ethical situations. Users who pass a rigorous final assessment receive a badge on their ACS Paragon Plus profile to indicate this accomplishment.

Skills: Communications, Technical Review and Writing, Diversity, Equity, and Inclusion

Audience: Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Early-Career, Mid-Career,

Governance Oversight: No

Frequency: As needed

Format: On-demand, web-based

Length of each instance: 90 min to <4 hrs

Follow up: No

Assessment: Yes

Evaluation: No

Participants per instance: 41+

Cost: No

## **ACS Career Kickstarter**

To provide career & professional development tools to graduate students and postdocs at a university

Skills: Business and Management Acumen, Technical Skills, Lab Safety, Communications, Leadership, Innovation and Creativity, Technical Review and Writing

Audience: Graduate Student, Postdoctoral scholar

Governance Oversight: No

Frequency: As needed

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: No

Assessment: Yes

Evaluation: Yes

Participants per instance: 21-40

Cost: Yes

## **Postdoc to Faculty Workshop**

To learn about positions and respective expectations in undergraduate and graduate departments in the chemical sciences

Skills: Technical Skills, Lab Safety, Communications, Diversity, Equity, and Inclusion, Approaches to Chemistry Teaching and Learning

Audience: Postdoctoral scholar

Governance Oversight: No

Frequency: Once a year

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: No

Assessment: Yes

Evaluation: Yes

Participants per instance: 41+

Cost: Yes

## **ACS Bridge Project**

To broaden participation in graduate education

Skills: Communications, Diversity, Equity, and Inclusion

Audience: Undergraduate student, Graduate Student

Governance Oversight: No

Frequency: Other: ongoing

Format: Face-to-face

Length of each instance: Other: at ACS NM and in chemistry departments

Follow up: Yes, a webinar

Assessment: Yes

Evaluation: Yes

Participants per instance: 41+

Cost: No

## **C&EN Webinars, C&EN White papers**

Technical training on application of certain technologies or processes

Skills: Technical Skills, Lab Safety

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry, government chemist, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Weekly

Format: Webinar

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 41+

Cost: No

## **Career-related advice (ChemJobber, Jen Heemstra) and presentations by C&EN staff at conferences and universities**

Soft skills training, guidance. Training on how to write, career opportunities, use of social media, lab safety issues, etc

Skills: Business and Management Acumen, Lab Safety, Communications, Leadership

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Other: Regularly. Weekly for columns in C&EN. Ad hoc for talks, presentations

Format: Hybrid, online and face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 41+

Cost: No



## **Sexual harassment workshop, Power Hour**

Raising awareness of issues around sexual harassment. The workshop was a one off, which we are now for Orlando turning into an (at least) annual Power Hour where there will be presentations and an opportunity for attendees to discuss diversity and inclusion. Organized in collaboration with Gordon Research Conferences

Skills: Diversity, Equity, and Inclusion

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Other:Power Hour is starting in Orlando and it'll be an at-least-once-per-year occurrence

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 41+

Cost: No, Free for ACS Members

## **Green Chemistry & Engineering Student Workshop**

Basic green chemistry & engineering information, networking skills, etc.

Skills: Business and Management Acumen, Technical Skills, Communications, Leadership, Innovation and Creativity, Technical Review and Writing, Chemistry Content Knowledge

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Entrepreneurs, ACS members, Early-Career

Governance Oversight: No

Frequency: Once a year

Format: Face-to-face

Length of each instance: 4 to 8 hrs

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 41+

Cost: No

## **Career Workshop: Essential Green Chemistry Tools and Techniques for Pharmaceutical Scientists**

green chemistry tools and techniques for pharmaceutical chemists

Skills: Technical Skills, Leadership, Innovation and Creativity, Chemistry Content Knowledge

Audience: Graduate Student, Postdoctoral scholar, Faculty, Industry, government chemist, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Other: At National Meetings

Format: Face-to-face

Length of each instance: 4 to 8 hrs

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 11-20

Cost: No

## **C&EN Webinars**

C&EN webinars are revenue driven. Content is hosted by the sponsor, but encouraged to present case studies or best practices. Our webinars are almost always sponsored by instrumentation companies.

Skills: Lab Safety, Innovation and Creativity, Approaches to Chemistry Teaching and Learning

Audience: Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Other: 50-60 webinars per year

Format: Webinar

Length of each instance: 30 to <90 minutes

Follow up: Yes

Assessment: No

Evaluation: No

Participants per instance: 41+

Cost: No

## **Project SEED Coordinator, Mentor Training - Webinar**

Train new and current Project SEED coordinators on how to submit a successful SEED site application, host a site, and provide meaningful experiences for the SEED participants.

Skills: Lab Safety, Diversity, Equity, and Inclusion, ACS Program process/management

Audience: High school student, Volunteer leader, ACS members

Governance Oversight: Yes: SEED

Frequency: As needed

Format: On-demand, web-based

Length of each instance: 30 to <90 minutes

Follow up: Yes, Webinar is broken up into parts. Note that 2018-9 is the first year this is done, but the plan is to host 2 webinars for coordinators, mentors

Assessment: No

Evaluation: No

Participants per instance: 11-20

Cost: No

## **Project SEED Participant Webinar Series**

A series of webinars to expose Project SEED participants to expectations for the summer research experience, careers in chemistry, how to make a presentation, and safety considerations while in the lab.

Skills: Lab Safety, Technical Review and Writing, Careers in chemistry

Audience: High school student, High school teacher, Volunteer leader

Governance Oversight: Yes: SEED

Frequency: Once a year

Format: Webinar

Length of each instance: 30 to <90 minutes

Follow up: Yes, Webinar series (one a week for about 4 weeks)

Assessment: No

Evaluation: Yes

Participants per instance: 41+

Cost: No

## **ACS Scholars Crash Course**

Educate ACS Scholars on expectations as an ACS Scholar, importance of mentoring, how to find, and how to foster strong relationships.

Skills: Student strategies for success

Audience: Undergraduate student

Governance Oversight: No

Frequency: Once a year

Format: Webinar

Length of each instance: 30 to <90 minutes

Follow up: Yes, Additional webinars with various other topics. May be facilitated by corporate partner (ie. careers in pharmaceutical chemistry)

Assessment: No

Evaluation: No

Participants per instance: 41+

Cost: No

## **ChemIDP: Planning For Your Career**

- 1) Understand the components associated with the Individual Development Plan (IDP) process
- 2) Connect the components of the IDP process with
- 3) Assess what steps to take next
- 4) Identify strategies and resources for taking those next steps

Skills: Business and Management Acumen, Technical Skills, Communications, Innovation and Creativity, Technical Review and Writing

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar

Governance Oversight: Yes

Frequency: Other: At least eight times a year

Format: Face-to-face

Length of each instance: 90 min to <4 hrs

Follow up: Yes, A follow up email or virtual meeting

Assessment: No

Evaluation: Yes

Participants per instance: 21-40

Cost: No



## **ACS-Hach Mentoring Program**

To provide mentoring support and professional development to early career high school chemistry teachers within the first 3 years of the profession.

Skills: Technical Skills, Lab Safety, Approaches to Chemistry Teaching and Learning

Audience: High school teacher

Governance Oversight: No

Frequency: Once a year

Format: Hybrid, online and face-to-face

Length of each instance: Other: As needed throughout the academic year

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 11-20

Cost: No

## **Advocacy Training**

Teaching ACS members how to advocate for ACS Public Priority Positions and providing the means to do so.

Skills: Communications, Leadership

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Other:Reginal and National Meetings

Format: Face-to-face

Length of each instance: 90 min to <4 hrs

Follow up: Yes, Webinars

Assessment: Yes

Evaluation: Yes

Participants per instance: 41+

Cost: No, Free for ACS Members

## **ACS Reviewer Lab**

To explain best practices for delivering a thoughtful, high-quality review, providing guidance on identifying the core criteria for evaluating manuscripts, writing a helpful review, and navigating difficult ethical situations

Skills: Communications, Technical Review and Writing, Diversity, Equity, and Inclusion

Audience: Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Early-Career, Mid-Career

Governance Oversight: No

Frequency: As needed

Format: On-demand, web-based

Length of each instance: 90 min to <4 hrs

Follow up: No

Assessment: Yes

Evaluation: Yes

Participants per instance: 41+

Cost: No

## **Webinar: Everything You Want to Know About Periodic Reports**

To help the community complete periodic reports. ACS approved programs are required to submit these every six years in order to maintain approval.

Skills: Communications, Change and Risk Management, Approaches to Chemistry Teaching and Learning,

Audience: Faculty

Governance Oversight: No

Frequency: Once a year

Format: Webinar

Length of each instance: 30 to <90 minutes

Follow up: Yes, The webinar is available on our website for ad hoc viewing.

Assessment: No

Evaluation: Yes

Participants per instance: 21-40

Cost: No

## **Periodic Report Tutorials**

Short tutorials to help faculty in approved programs understand the nuances of the ACS Guidelines for Approved Bachelor's Degree Programs.

Skills: Communications, Change and Risk Management, Approaches to Chemistry Teaching and Learning

Audience: Faculty

Governance Oversight: No

Frequency: Other: this is a new program, so we anticipate publishing 2, year

Format: On-demand, web-based

Length of each instance: Other: 5 minutes or less

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 5-10

Cost: No

## **Recruiting and Promoting Your Division More Effectively**

Orienting Division Leaders to the basic tenants of recruitment and engagement marketing by giving them easy to execute ideas they can employ in their Divisions.

Skills: Communications

Audience: Volunteer leader

Governance Oversight: No

Frequency: Once a year

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 21-40

Cost: No

## **Using Social Media for Your Local Section: Beginner Track**

Providing a basic overview and introduction to social media and how it can be a useful tool for local sections in promoting outreach activity and communication with members

Skills: Technical Skills, Communications, Leadership, Innovation and Creativity

Audience: Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Once a year

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 11-20

Cost: No

## **Using Social Media for Your Local Section: Intermediate Track**

Presenting and discussing best practices for social media and how it can benefit Local Section activities, including an overview of how metrics can be collected.

Skills: Technical Skills, Communications, Leadership, Innovation and Creativity

Audience: Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Once a year

Format: Face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 11-20

Cost: No



## **ACS Experts Training**

Train a small, hand selected group of ACS members, who are experts in a specific area of chemistry, how to talk to the media.

Skills: Communications, Chemistry Content Knowledge

Audience: Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Once a year

Format: Hybrid, online and face-to-face

Length of each instance: 90 min to <4 hrs

Follow up: Yes, A mixture of face-to-face meetings and emails.

Assessment: No

Evaluation: Yes

Participants per instance: 5-10

Cost: No

## **New Faculty Workshops**

The New Faculty Workshops focus on sharing and developing essential skills that faculty need to successfully navigate the early years of their research and teaching careers.

Skills: Lab Safety, Technical Review and Writing, Diversity, Equity, and Inclusion, Approaches to Chemistry Teaching and Learning, Mentoring

Audience: Faculty

Governance Oversight: Yes: SOCED

Frequency: Other:3-4 workshops per year

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: Yes, approximately monthly webinars; in-person gatherings when possible at ACS meetings

Assessment: Yes

Evaluation: Yes

Participants per instance: 41+

Cost: Yes

## **Speaking Simply: Science Communications Training**

Help scientists learn how to communicate with the public

Skills: Communications, Approaches to Chemistry Teaching and Learning

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: Other: This has been taught in a variety of venues and is currently be revamped.

Format: Face-to-face

Length of each instance: Other: Length depends on venue...can be < 1 hour or 4-5 hours.

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 11-20

Cost: Yes

## **Social Media Training**

To help staff, ACS members understand how to effectively use social media

Skills: Technical Skills, Communications

Audience: High school student, High school teacher, Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: No

Frequency: As needed

Format: Hybrid, online and face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 5-10

Cost: No

## Career Pathways Program

ACS Career Pathways workshops were designed to fit within the ACS learning ecosystem. Available at all national, regional, and local meetings. Available for online and international presentation.

Skills: Technical Skills, Communications, Innovation and Creativity, Global Mindset, Technical Review and Writing, Guide participants through a process of career exploration and preparation, Include interactive exercises and incorporate strategies that reflect knowledge of how people learn, Direct participants to additional resources and skills for career development

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: Yes: CEPA

Frequency: Monthly

Format: Hybrid, online and face-to-face

Length of each instance: 90 min to <4 hrs

Follow up: No

Assessment: Yes

Evaluation: Yes

Participants per instance: 41+

Cost: Free for ACS Members

## **Chemistry for Non Chemists**

To learn chemistry for beginners

Skills: Chemistry Content Knowledge, Approaches to Chemistry Teaching and Learning

Audience: Industry, government chemist, ACS members, Early-Career

Governance Oversight: No

Frequency: As needed

Format: Online, non-webinar

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 5-10

Cost: Yes

## **Meetings & Events Marketing**

To educate volunteer meeting organizers on basic marketing strategy and explain the ways to work with your marketing partner at ACS.

Skills: Communications, Consulting on website development, graphics, social media best practices, etc as they relate to meeting and event planning

Audience: Volunteer leader

Governance Oversight: No

Frequency: As needed

Format: Hybrid, online and face-to-face

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 5-10

Cost: No

## **CAS Future Leaders**

To deliver a mix of leadership training by policy-makers, professional science communicators and other recognized leaders in the private and public sectors and to share insights from science industry thought leaders, venture capitalists and entrepreneurs who have successfully transitioned from the bench to the boardroom.

Skills: Business and Management Acumen, Technical Skills, Communications, Leadership, Innovation and Creativity, Global Mindset, Diversity, Equity, and Inclusion

Audience: Graduate Student, Postdoctoral scholar, Early-Career

Governance Oversight: No

Frequency: Once a year

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: No

Assessment: No

Evaluation: No

Participants per instance: 21-40

Cost: No



## **ACS Leadership Development System Courses**

The ACS Leadership Development System® courses concentrates on the development of four main areas of core leadership competency (personal capability, interpersonal skills, focusing on results and setting a clear direction) and the overarching character competency.

Skills: Leadership, Innovation and Creativity, Change and Risk Management

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: Yes

Frequency: Other: At the LI, National Meetings, Regional Meetings, On Demand

Format: Face-to-face

Length of each instance: 4 to 8 hrs

Follow up: No,

Assessment: No

Evaluation: Yes

Participants per instance: 21-40

Cost: Yes, Free for ACS Members

## **ACS LDS e-learning courses**

The ACS Leadership Development System concentrates on the development of four main areas of core leadership competency (personal capability, interpersonal skills, focusing on results and setting a clear direction) and the overarching character competency.

Skills: Business and Management Acumen, Leadership, ACS and member engagement

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: Yes

Frequency: As needed

Format: On-demand, web-based

Length of each instance: 30 to <90 minutes

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 5-10

Cost: No, Free for ACS Members

## **Strategic Planning Retreats**

SPRs provide participants with the opportunity to apply the strategic planning process used by the Society to their group.

Skills: Business and Management Acumen, Leadership

Audience: Volunteer leader, ACS members

Governance Oversight: Yes

Frequency: As needed

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: Yes, Component units work to deploy implementation plans.

Assessment: No

Evaluation: Yes

Participants per instance: 11-20

Cost: Yes

## **ACS Leadership Institute**

The Leadership Institute is an annual invitation-only conference where ACS leaders come together to learn both management and leadership skills to enable them to be successful leaders within the American Chemical Society.

Skills: Business and Management Acumen, Leadership, ACS and member engagement

Audience: Undergraduate student, Graduate Student, Postdoctoral scholar, Faculty, Industry/government chemist, Entrepreneurs, Volunteer leader, ACS members, Early-Career, Mid-Career, Late-Career

Governance Oversight: Yes

Frequency: Once a year

Format: Face-to-face

Length of each instance: Multiple consecutive days

Follow up: No

Assessment: No

Evaluation: Yes

Participants per instance: 41+

Cost: N