Assessment Mini-Tool

Chemistry Infrastructure in Two-Year College Programs

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Introduction and Instructions

Scope

This assessment of chemistry infrastructure corresponds to Section IV of the *ACS Assessment Tool for Chemistry in Two-Year College Programs*. The assessment tool is designed to allow chemistry faculty and administrations to assess the achievements and areas for improvement of the chemistry-based programs and courses at their institution.

This section assesses only the chemistry infrastructure at your institution. It will guide you through the following topics:

* Classrooms
* Offices
* Laboratories
* Chemical stockroom and storage facilities
* Chemical safety and waste disposal

For a more in-depth evaluation of chemistry or chemistry-based technology education at your college, please use the complete *ACS Assessment Tool for Chemistry in Two-Year College Programs*, which can be downloaded at www.acs.org/2YGuidelines.

Instructions for using the assessment mini-tool

Collect data prior to completion of the mini-tool assessment form.

The mini- tool compiles a wide range of data from a variety of sources. It is most efficient to compile the data prior to completion of the assessment form.

It may be beneficial to consult the *ACS Guidelines for Chemistry in Two-Year College Programs* while completing the form. The PDF may be downloaded at [www.acs.org/2YGuidelines](http://www.acs.org/2YGuidelines); hardcopies are available upon request from the ACS Office of Two-Year Colleges.

Complete the comments sections.

Completing the comments sections in the form provides extra nuance to your assessment. For example, a question may ask whether funds are available for faculty professional development, and you may indicate that it is. In the comments section, you could then describe whether these funds are sufficient to keep faculty current in their fields, whether faculty are encouraged to use these funds, and so on.

***Consider completion of other mini-tools.***

Once you have completed this mini-tool, you can choose to assess other aspects of chemistry and chemistry-based technology education at your institution. ACS offers assessment mini-tools that address institutional environment, faculty and staff, infrastructure, curriculum, scholarly research and related activities, development of student skills, student mentoring and advising, self-evaluation and assessment, and partnerships.

A more in-depth analysis can be achieved using the complete *ACS Assessment Tool for Chemistry in Two-Year College Programs*, which collects demographics information and leads the user through an analysis of the challenges and opportunities available. If you use the complete form, you may replace Section III with the results of this assessment of faculty and staff status.

Contact ACS with questions and feedback.

Please direct any questions or concerns, as well as feedback regarding the assessment tool itself, to the ACS Office of Two-Year Colleges (2YColleges@acs.org; 1-800-227-5558, ext. 6108).

Development of the assessment tool

When the revised *ACS Guidelines for Chemistry in Two-Year College Programs* were released in 2009, the Society Committee on Education (SOCED) appointed the Task Force on Two-Year College Activities. The task force was charged with determining the interest in and viability of strategies for engaging and supporting two-year college programs.

In 2010, the task force partnered with the governing body of the ACS Two-Year College Chemistry Consortium (2YC3), the ACS Division of Chemical Education Committee on Chemistry in the Two-Year College (COCTYC). Together, the task force and COCTYC are developing several resources for the two-year college chemistry community.

One such resource was the *ACS Assessment Tool for Chemistry in Two-Year College Programs*. This tool was developed in recognition of the increasing pressure on two-year college programs to document and assess their activities. The tool was piloted and refined in 2011–2012 and released to the general public in 2013. It is managed by the ACS Office of Two-Year Colleges with input from the Two-Year College Advisory Board and the Assessment Review Panel.

In 2014, Sections II through X of the *ACS Assessment Tool for Chemistry in Two-Year College Programs* were made available as individual tools for assessment specific aspects of two-year college programs.

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Infrastructure

See Section 4 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 7-10.

A. Classrooms

**List the classrooms used for chemistry lecture (non-lab) activities.**

[ ]  Additional classroom information is attached.

|  |  |  |  |
| --- | --- | --- | --- |
| ***Classroom*** | ***Seating capacity*** | ***ADA compliant?*** | ***Shared with other disciplines?*** |
| #1 | Click here to enter text. | [ ]  Yes[ ]  No | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |
| #2 | Click here to enter text. | [ ]  Yes[ ]  No | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |
| #3 | Click here to enter text. | [ ]  Yes[ ]  No | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |
| #4 | Click here to enter text. | [ ]  Yes[ ]  No | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |
| #5 | Click here to enter text. | [ ]  Yes[ ]  No | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |

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B. Offices

**List the offices used by chemistry faculty.**

[ ]  Additional office information is attached.

|  |  |  |
| --- | --- | --- |
| ***Office*** | ***Number of occupants*** | ***Comment***  |
| #1 | Click here to enter text. | Click here to enter text. |
| #2 | Click here to enter text. | Click here to enter text. |
| #3 | Click here to enter text. | Click here to enter text. |
| #4 | Click here to enter text. | Click here to enter text. |
| #5 | Click here to enter text. | Click here to enter text. |

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C. Laboratories

1. **List the rooms used for laboratory activities.**

[ ]  Additional information is attached.

| ***Laboratory*** | ***Square footage*** | ***Student capacity*** | ***Number of***  | ***ADA compliant?*** |
| --- | --- | --- | --- | --- |
| #1 | Click here to enter text. | Click here to enter text. | Fume hoods: Click here to enter text.Safety showers: Click here to enter text.Eye washes: Click here to enter text.Fire extinguishers: Click here to enter text. | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |
| #2 | Click here to enter text. | Click here to enter text. | Fume hoods: Click here to enter text.Safety showers: Click here to enter text.Eye washes: Click here to enter text.Fire extinguishers: Click here to enter text. | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |
| #3 | Click here to enter text. | Click here to enter text. | Fume hoods: Click here to enter text.Safety showers: Click here to enter text.Eye washes: Click here to enter text.Fire extinguishers: Click here to enter text. | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |
| #4 | Click here to enter text. | Click here to enter text. | Fume hoods: Click here to enter text.Safety showers: Click here to enter text.Eye washes: Click here to enter text.Fire extinguishers: Click here to enter text. | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |
| #5 | Click here to enter text. | Click here to enter text. | Fume hoods: Click here to enter text.Safety showers: Click here to enter text.Eye washes: Click here to enter text.Fire extinguishers: Click here to enter text. | [ ]  Yes[ ]  No |
| ***Comments:*** Click here to enter text. |

1. **Is there a first aid kit convenient to each lab?**

[ ]  Yes

[ ]  No

1. **Do the labs comply with all federal and state regulations for safety and accommodation? (yes or no)**

[ ]  Yes

[ ]  No.

**If no, then describe efforts to improve compliance with federal and state regulations.**

Click here to enter text.

1. **Indicate which of the following instrumentation is available to students, either onsite or at another convenient location. (Check all that apply.)**

[ ]  Infrared spectrometer (IR)

[ ]  Fourier transform infrared spectrometer (FT-IR)

[ ]  Nuclear magnetic resonance spectrometer (NMR)

[ ]  Fourier transform nuclear magnetic resonance spectrometer (FT-NMR)

[ ]  UV-Vis spectrometer

[ ]  Gas chromatograph

[ ]  Mass spectrometer

[ ]  Melting point apparatus

[ ]  Centrifuge

[ ]  pH meter

[ ]  Top-loading balance

[ ]  Analytical balance

[ ]  High-performance liquid chromatograph (HPLC)

[ ]  Ion chromatograph

[ ]  Other (specify): Click here to enter text.)

1. **Indicate which of the following equipment students have adequate access to. (Check all that apply.)**

[ ]  Volumetric glassware

[ ]  Thermometers

[ ]  Hot plates

[ ]  Bunsen burners

[ ]  Filtration equipment

[ ]  Microscale or full scale organic kits

[ ]  Software for data acquisition and analysis

1. **Provide any additional information about access to equipment.**

Click here to enter text.

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D. Chemical stockroom and storage facilities

1. **List the rooms used for chemical stockroom.**

[ ]  Additional information is attached.

|  |  |  |
| --- | --- | --- |
| ***Stockroom #1*** |  |  |
| Does stockroom conform to government standards and regulations? | [ ]  Yes[ ]  No | If no, describe efforts to improve compliance with federal and state regulations.Click here to enter text. |
| Is the stockroom located in the vicinity of the laboratories? | [ ]  Yes[ ]  No | If no, describe efforts to ensure safe distribution of the chemicals to the laboratories.Click here to enter text. |
| Does the stockroom provide safe chemical storage area(s)? | [ ]  Yes[ ]  No | Comments :Click here to enter text. |
| Does the stockroom provide safe chemical handling area(s)? | [ ]  Yes[ ]  No | Comments :Click here to enter text. |
| Does the stockroom provide safe chemical preparation area(s)? | [ ]  Yes[ ]  No | Comments :Click here to enter text. |
| ***Stockroom #2*** |  |  |
| Does the stockroom conform to government standards and regulations? | [ ]  Yes[ ]  No | If no, describe efforts to improve compliance with federal and state regulations.Click here to enter text. |
| Is the stockroom located in the vicinity of the laboratories? | [ ]  Yes[ ]  No | If no, describe efforts to ensure safe distribution of the chemicals to the laboratories.Click here to enter text. |
| Does the stockroom provide safe chemical storage area(s)? | [ ]  Yes[ ]  No | Comments :Click here to enter text. |
| Does the stockroom provide safe chemical handling area(s)? | [ ]  Yes[ ]  No | Comments :Click here to enter text. |
| Does the stockroom provide safe chemical preparation area(s)? | [ ]  Yes[ ]  No | Comments :Click here to enter text. |

1. **Are chemicals stored in accordance with federal, state, and local standards and regulations?**

[ ]  Yes

[ ]  Yes, with the following exceptions: Click here to enter text.

[ ]  No

Describe efforts to improve compliance with federal, state, and local standards and regulations, if needed.

Click here to enter text.

1. **Are segregated areas provided for acids and bases?**

[ ]  Yes

[ ]  No

[ ]  N/A

1. **Are segregated areas provided for reducing and oxidizing agents?**

[ ]  Yes

[ ]  No

[ ]  N/A

1. **Are segregated areas provided for particularly hazardous substances?**

[ ]  Yes

[ ]  No

[ ]  N/A

1. **Do cabinets and refrigerators that store flammable materials meet the federal and state Occupational Safety and Health Administration (OSHA) regulations?**

[ ]  Yes

[ ]  No

[ ]  N/A

1. **Are National Fire Protection Association (NFPA) labeling codes used on all reagents and storage facilities?**

[ ]  Yes

[ ]  No

[ ]  N/A

Provide any additional comments on the chemical stockroom and storage facilities.

 Click here to enter text.

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E. Chemical safety and waste disposal

1. **Does the campus, division, department, or program have a written chemical hygiene plan?**

[ ]  Yes

[ ]  No
[ ]  N/A

Describe efforts to develop or update the chemical hygiene plan, if needed.

Click here to enter text.

1. **Is hazardous waste managed in accordance with federal, state, and local standards and regulations? (Note: this may be addressed in the chemical hygiene plan.)**

[ ]  Yes

[ ]  Yes, with the following exceptions: Click here to enter text.
[ ]  No

Describe efforts to improve compliance with federal, state, and local regulations standards and regulations, if needed.

Click here to enter text.

1. **Is there a policy of maximum stockroom chemical holdings, including small quantities for especially hazardous materials? (Note: this may be addressed in the chemical hygiene plan.)**

[ ]  Yes

[ ]  No
[ ]  N/A

1. **Is safety information and reference materials, such as material safety data sheets (MSDSs), readily available to all faculty and students?**

[ ]  Yes, available to faculty

[ ]  Yes, available to students
[ ]  Yes, with the following exceptions: Click here to enter text.
[ ]  No

1. **Is personal protective equipment, such as goggles, gloves, and other appropriate equipment readily available to all faculty and students?**

[ ]  Yes, available to faculty

[ ]  Yes, available to students
[ ]  Yes, with the following exceptions: Click here to enter text.
[ ]  No

Provide any additional comments on the safety resources available for chemistry faculty and students.

 Click here to enter text.

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Provide any additional comments on the infrastructure used for chemistry education.

 Click here to enter text.

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