ACS Assessment Tool

for Chemistry in Two-Year College Programs

Section VI. Curriculum

Scope of assessment tool section

The following is Section VI of the *ACS Assessment Tool for Chemistry in Two-Year College Programs*. The form will guide you through a self-assessment of the following topics:

* Pedagogy and prerequisites
* Preparatory chemistry courses
* General chemistry courses
* Organic chemistry courses
* Chemistry-based technology courses
* Chemistry for allied health/health sciences courses
* General education chemistry courses
* Other specialty chemistry courses
* Development outside of coursework
* Course scheduling and development

Other sections of the tool address other aspects of chemistry-based education. For a more in-depth evaluation of chemistry or chemistry-based technology education at your institution, use the complete *ACS Assessment Tool for Chemistry in Two-Year College Programs*.

***Note:*** for ease of use, the assessment tool is password-protected. If you wish to edit the form, you may unlock it using the password, “assess.”

The assessment tool is a resource developed by ACS to facilitate the assessment of chemistry education with respect to the *ACS Guidelines 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. Developed by two-year college chemistry faculty, it is managed by the ACS Undergraduate Programs Office with input from the Undergraduate Programs Advisory Board and the Assessment Review Panel.

A. Pedagogy and prerequisites

(See Sections 5.1 and 5.3 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 16-17.)

1. **Indicate your agreement with the following statements.**

|  | *Strongly agree* | *Agree* | *Disagree* | *Strongly disagree* | *Not Applicable* |
| --- | --- | --- | --- | --- | --- |
| Faculty members are encouraged to use a variety of pedagogical techniques. |[ ] [ ] [ ] [ ] [ ]
| *Comments:* Click here to enter text. |
| Faculty members have support to stay current with best practices in chemistry pedagogy. |[ ] [ ] [ ] [ ] [ ]
| *Comments:* Click here to enter text. |
| Chemistry faculty regularly take advantage of opportunities to learn and apply new pedagogical techniques. |[ ] [ ] [ ] [ ] [ ]
| *Comments:* Click here to enter text. |

1. **Indicate who is involved with the following.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Determining course prerequisites | Assessing student preparation and readiness for chemistry courses | Ensuring student compliance with course prerequisites |
| Faculty |[ ] [ ] [ ]
| Student services department(s) |[ ] [ ] [ ]
| Administration |[ ] [ ] [ ]
| District |[ ] [ ] [ ]
| State |[ ] [ ] [ ]
| Other (specify): Click here to enter text. |[ ] [ ] [ ]

1. **Indicate the mechanisms in place to support students who do not meet readiness requirements for chemistry courses.**

[ ]  Remedial courses

[ ]  “Fast-track” remediation

[ ]  Concurrent remediation [i.e., remediation that takes place while student is enrolled in course]

[ ]  Counseling

[ ]  Tutoring

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

B. Preparatory chemistry courses

(See Sections 5.1-5.5, 5.7, and 5.14 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 15-18,19, 21-22, unless otherwise noted.)

***Course availability***

|  |
| --- |
| List the title(s) or code(s) for the course(s) that fit this category.[ ]  No courses fit this category* Click here to enter text.
 |
| How often are preparatory chemistry courses offered, on average? | [ ]  More than once per year[ ]  Once per year[ ]  Less than once per year | What is the total number of students enrolled in preparatory chemistry courses? | Click here to enter text. [ ] per term [ ] per year |

Course instruction

|  |  |  |  |
| --- | --- | --- | --- |
| What pedagogies are used in teaching preparatory chemistry lecture? | [ ]  Traditional lecture[ ]  Inquiry-based/POGIL[ ]  Flipped classroom[ ]  Online lecture[ ]  Blended lecture/lab[ ]  Other (specify: Click here to enter text.) | What pedagogies are used in teaching preparatory chemistry lab?  | [ ]  Traditional, hands-on[ ]  Inquiry-based, hands-on[ ]  Team-based, hands-on[ ]  At home (“kitchen chemistry”), hands-on [ ]  Computer simulations[ ]  Other (specify: Click here to enter text.) |
| How is preparatory chemistry instruction assessed?  | Click here to enter text. | **Is preparatory chemistry instruction consistent, in content and rigor, among all faculty?**  | [ ]  Yes[ ]  Somewhat[ ]  NoComments: Click here to enter text. |
| **Is student completion and performance in preparatory chemistry aligned with the goals of your program, department, program, and/or institutions?** [ ]  Yes [ ]  No***Comments***: Click here to enter text. |

Course content

|  |  |
| --- | --- |
| Do preparatory chemistry courses transfer as chemistry courses? | [ ]  Yes, to other two-year colleges[ ]  Yes, to four-year institutions[ ]  No |
| Who is involved in determining course content?  | [ ]  Individual chemistry faculty[ ]  Chemistry faculty, as a team[ ]  Other faculty at this institution[ ]  Faculty at other institutions[ ]  Employers  | [ ]  Administration[ ]  District or state[ ]  Other (specify): Click here to enter text. |

Development of student skills

| **Indicate which of the following student skills are addressed in preparatory chemistry courses.** (See Sections 5.6 and 7.1-7.7 of the *ACS Guidelines for Chemistry in Two-Year College Programs*, p. 18-19,25-29.) |
| --- |
| **Chemical safety**  |
| [ ]  | Recognizing/identifying/mitigating hazards | [ ]  | Use of personal protective equipment |
| [ ]  | Risk assessment | [ ]  | Storing and handling flammable, corrosive, and incompatible chemicals |
| [ ]  | Preparing for/responding to emergencies | [ ]  | Use of emergency and safety equipment |
| [ ]  | Safety regulations, knowledge and compliance | [ ]  | Ethics of safety |
| [ ]  | Waste management and disposal | [ ]  | Other (specify): Click here to enter text. |
| [ ]  | Locating and using hazard recognition information and systems | [ ]  | Other (specify): Click here to enter text. |
| **Problem-solving and critical thinking**  | **Communication** |
| [ ]  | Definition of problems | [ ]  | Written communication of technical information |
| [ ]  | Development of testable hypotheses | [ ]  | Oral communication of technical information |
| [ ]  | Experiment design | [ ]  | Visual representation of complex data sets |
| [ ]  | Experiment execution | [ ]  | Use of chemical structure drawing programs |
| [ ]  | Data, error, and information analysis | [ ]  | Use of poster and computerized presentation software |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Communication with academic, business, and other audiences |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Teamwork and leadership** | **Ethics** |
| [ ]  | Leadership of a diverse group | [ ]  | Objective and accurate presentation of results |
| [ ]  | Providing a clear vision for team | [ ]  | Sharing of ideas and information |
| [ ]  | Synthesis of individual contributions into complete product | [ ]  | Accurate and complete laboratory records |
| [ ]  | Contribution to team work | [ ]  | Credit and respect for all classmates, educators, colleagues, and others |
| [ ]  | Productive interaction with teammates | [ ]  | Comprehension of the health, safety and environmental impacts of work |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Chemical information**  | **Career preparation** |
| [ ]  | Chemical information identification and retrieval  | [ ]  | Networking |
| [ ]  | Critical evaluation of technical articles | [ ]  | Resume-writing |
| [ ]  | Analyzing, interpreting, and citing chemical literature | [ ]  | Interviewing |
| [ ]  | Data management and archiving | [ ]  | Expectations of the workplace |
| [ ]  | Recordkeeping/lab notebooks | [ ]  | Workplace environment  |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |

How is students’ chemical knowledge in preparatory chemistry courses assessed?

* Click here to enter text.

**How is student skills development in preparatory chemistry courses assessed?**

* Click here to enter text.

**How effective are the content, format, and teaching of preparatory chemistry courses.**

* Click here to enter text.

C. General chemistry courses

(See Sections 5.1-5.5, 5.8, and 5.14 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 15-18,19-20, 21-22, unless otherwise noted.)

***Course availability***

|  |
| --- |
| List the title(s) or code(s) for the course(s) that fit this category.[ ]  No courses fit this category* Click here to enter text.
 |
| How often are general chemistry courses offered, on average? | [ ]  More than once per year[ ]  Once per year[ ]  Less than once per year | What is the total number of students enrolled in general chemistry courses? | Click here to enter text. [ ] per term [ ] per year |

Course instruction

|  |  |  |  |
| --- | --- | --- | --- |
| What pedagogies are used in teaching general chemistry lecture? | [ ]  Traditional lecture[ ]  Inquiry-based/POGIL[ ]  Flipped classroom[ ]  Online lecture[ ]  Blended lecture/lab[ ]  Other (specify: Click here to enter text.) | What pedagogies are used in teaching general chemistry lab?  | [ ]  Traditional, hands-on[ ]  Inquiry-based, hands-on[ ]  Team-based, hands-on[ ]  At home (“kitchen chemistry”), hands-on [ ]  Computer simulations[ ]  Other (specify: Click here to enter text.) |
| How is general chemistry instruction assessed?  | Click here to enter text. | **Is general chemistry instruction consistent, in content and rigor, among all faculty?**  | [ ]  Yes[ ]  Somewhat[ ]  NoComments: Click here to enter text. |
| **Is student completion and performance in general chemistry aligned with the goals of your program, department, program, and/or institutions?** [ ]  Yes [ ]  No***Comments***: Click here to enter text. |

Course content

|  |  |
| --- | --- |
| Do general chemistry courses transfer as chemistry courses? | [ ]  Yes, to other two-year colleges[ ]  Yes, to four-year institutions[ ]  No |
| Who is involved in determining course content?  | [ ]  Individual chemistry faculty[ ]  Chemistry faculty, as a team[ ]  Other faculty at this institution[ ]  Faculty at other institutions[ ]  Employers  | [ ]  Administration[ ]  District or state[ ]  Other (specify): Click here to enter text. |

Development of student skills

| **Indicate which of the following student skills are addressed in general chemistry courses.** (See Sections 5.6 and 7.1-7.7 of the *ACS Guidelines for Chemistry in Two-Year College Programs*, p. 18-19,25-29.) |
| --- |
| **Chemical safety**  |
| [ ]  | Recognizing/identifying/mitigating hazards | [ ]  | Use of personal protective equipment |
| [ ]  | Risk assessment | [ ]  | Storing and handling flammable, corrosive, and incompatible chemicals |
| [ ]  | Preparing for/responding to emergencies | [ ]  | Use of emergency and safety equipment |
| [ ]  | Safety regulations, knowledge and compliance | [ ]  | Ethics of safety |
| [ ]  | Waste management and disposal | [ ]  | Other (specify): Click here to enter text. |
| [ ]  | Locating and using hazard recognition information and systems | [ ]  | Other (specify): Click here to enter text. |
| **Problem-solving and critical thinking**  | **Communication** |
| [ ]  | Definition of problems | [ ]  | Written communication of technical information |
| [ ]  | Development of testable hypotheses | [ ]  | Oral communication of technical information |
| [ ]  | Experiment design | [ ]  | Visual representation of complex data sets |
| [ ]  | Experiment execution | [ ]  | Use of chemical structure drawing programs |
| [ ]  | Data, error, and information analysis | [ ]  | Use of poster and computerized presentation software |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Communication with academic, business, and other audiences |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Teamwork and leadership** | **Ethics** |
| [ ]  | Leadership of a diverse group | [ ]  | Objective and accurate presentation of results |
| [ ]  | Providing a clear vision for team | [ ]  | Sharing of ideas and information |
| [ ]  | Synthesis of individual contributions into complete product | [ ]  | Accurate and complete laboratory records |
| [ ]  | Contribution to team work | [ ]  | Credit and respect for all classmates, educators, colleagues, and others |
| [ ]  | Productive interaction with teammates | [ ]  | Comprehension of the health, safety and environmental impacts of work |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Chemical information**  | **Career preparation** |
| [ ]  | Chemical information identification and retrieval  | [ ]  | Networking |
| [ ]  | Critical evaluation of technical articles | [ ]  | Resume-writing |
| [ ]  | Analyzing, interpreting, and citing chemical literature | [ ]  | Interviewing |
| [ ]  | Data management and archiving | [ ]  | Expectations of the workplace |
| [ ]  | Recordkeeping/lab notebooks | [ ]  | Workplace environment  |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |

How is students’ chemical knowledge in general chemistry courses assessed?

* Click here to enter text.

**How is student skills development in general chemistry courses assessed?**

* Click here to enter text.

**How effective are the content, format, and teaching of general chemistry courses.**

* Click here to enter text.

D. Organic chemistry courses

(See Sections 5.1-5.5, 5.9, and 5.14 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 15-18, 20, 21-22, unless otherwise noted.)

***Course availability***

|  |
| --- |
| List the title(s) or code(s) for the course(s) that fit this category.[ ]  No courses fit this category* Click here to enter text.
 |
| How often are organic chemistry courses offered, on average? | [ ]  More than once per year[ ]  Once per year[ ]  Less than once per year | What is the total number of students enrolled in organic chemistry courses? | Click here to enter text. [ ] per term [ ] per year |

Course instruction

|  |  |  |  |
| --- | --- | --- | --- |
| What pedagogies are used in teaching organic chemistry lecture? | [ ]  Traditional lecture[ ]  Inquiry-based/POGIL[ ]  Flipped classroom[ ]  Online lecture[ ]  Blended lecture/lab[ ]  Other (specify: Click here to enter text.) | What pedagogies are used in teaching organic chemistry lab?  | [ ]  Traditional, hands-on[ ]  Inquiry-based, hands-on[ ]  Team-based, hands-on[ ]  At home (“kitchen chemistry”), hands-on [ ]  Computer simulations[ ]  Other (specify: Click here to enter text.) |
| How is organic chemistry instruction assessed?  | Click here to enter text. | **Is organic chemistry instruction consistent, in content and rigor, among all faculty?**  | [ ]  Yes[ ]  Somewhat[ ]  NoComments: Click here to enter text. |
| **Is student completion and performance in organic chemistry aligned with the goals of your program, department, program, and/or institutions?** [ ]  Yes [ ]  No***Comments***: Click here to enter text. |

Course content

|  |  |
| --- | --- |
| Do organic chemistry courses transfer as chemistry courses? | [ ]  Yes, to other two-year colleges[ ]  Yes, to four-year institutions[ ]  No |
| Who is involved in determining course content?  | [ ]  Individual chemistry faculty[ ]  Chemistry faculty, as a team[ ]  Other faculty at this institution[ ]  Faculty at other institutions[ ]  Employers  | [ ]  Administration[ ]  District or state[ ]  Other (specify): Click here to enter text. |

Development of student skills

| **Indicate which of the following student skills are addressed in organic chemistry courses.** (See Sections 5.6 and 7.1-7.7 of the *ACS Guidelines for Chemistry in Two-Year College Programs*, p. 18-19,25-29.) |
| --- |
| **Chemical safety**  |
| [ ]  | Recognizing/identifying/mitigating hazards | [ ]  | Use of personal protective equipment |
| [ ]  | Risk assessment | [ ]  | Storing and handling flammable, corrosive, and incompatible chemicals |
| [ ]  | Preparing for/responding to emergencies | [ ]  | Use of emergency and safety equipment |
| [ ]  | Safety regulations, knowledge and compliance | [ ]  | Ethics of safety |
| [ ]  | Waste management and disposal | [ ]  | Other (specify): Click here to enter text. |
| [ ]  | Locating and using hazard recognition information and systems | [ ]  | Other (specify): Click here to enter text. |
| **Problem-solving and critical thinking**  | **Communication** |
| [ ]  | Definition of problems | [ ]  | Written communication of technical information |
| [ ]  | Development of testable hypotheses | [ ]  | Oral communication of technical information |
| [ ]  | Experiment design | [ ]  | Visual representation of complex data sets |
| [ ]  | Experiment execution | [ ]  | Use of chemical structure drawing programs |
| [ ]  | Data, error, and information analysis | [ ]  | Use of poster and computerized presentation software |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Communication with academic, business, and other audiences |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Teamwork and leadership** | **Ethics** |
| [ ]  | Leadership of a diverse group | [ ]  | Objective and accurate presentation of results |
| [ ]  | Providing a clear vision for team | [ ]  | Sharing of ideas and information |
| [ ]  | Synthesis of individual contributions into complete product | [ ]  | Accurate and complete laboratory records |
| [ ]  | Contribution to team work | [ ]  | Credit and respect for all classmates, educators, colleagues, and others |
| [ ]  | Productive interaction with teammates | [ ]  | Comprehension of the health, safety and environmental impacts of work |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Chemical information**  | **Career preparation** |
| [ ]  | Chemical information identification and retrieval  | [ ]  | Networking |
| [ ]  | Critical evaluation of technical articles | [ ]  | Resume-writing |
| [ ]  | Analyzing, interpreting, and citing chemical literature | [ ]  | Interviewing |
| [ ]  | Data management and archiving | [ ]  | Expectations of the workplace |
| [ ]  | Recordkeeping/lab notebooks | [ ]  | Workplace environment  |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |

How is students’ chemical knowledge in organic chemistry courses assessed?

* Click here to enter text.

**How is student skills development in organic chemistry courses assessed?**

* Click here to enter text.

**How effective are the content, format, and teaching of organic chemistry courses.**

* Click here to enter text.

E. Chemistry-based technology courses

(See Sections 5.1-5.5, 5.10, and 5.14 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 15-18, 20, 21-22, unless otherwise noted.)

***Course availability***

|  |
| --- |
| List the title(s) or code(s) for the course(s) that fit this category.[ ]  No courses fit this category* Click here to enter text.
 |
| How often are chemistry-based technology courses offered, on average? | [ ]  More than once per year[ ]  Once per year[ ]  Less than once per year | What is the total number of students enrolled in chemistry-based technology courses? | Click here to enter text. [ ] per term [ ] per year |

Course instruction

|  |  |  |  |
| --- | --- | --- | --- |
| What pedagogies are used in teaching chemistry-based technology lecture? | [ ]  Traditional lecture[ ]  Inquiry-based/POGIL[ ]  Flipped classroom[ ]  Online lecture[ ]  Blended lecture/lab[ ]  Other (specify: Click here to enter text.) | What pedagogies are used in teaching chemistry-based technology lab?  | [ ]  Traditional, hands-on[ ]  Inquiry-based, hands-on[ ]  Team-based, hands-on[ ]  At home (“kitchen chemistry”), hands-on [ ]  Computer simulations[ ]  Other (specify: Click here to enter text.) |
| How is chemistry-based technology instruction assessed?  | Click here to enter text. | **Is chemistry-based technology instruction consistent, in content and rigor, among all faculty?**  | [ ]  Yes[ ]  Somewhat[ ]  NoComments: Click here to enter text. |
| **Is student completion and performance in chemistry-based technology aligned with the goals of your program, department, program, and/or institutions?** [ ]  Yes [ ]  No***Comments***: Click here to enter text. |

Course content

|  |  |
| --- | --- |
| Do chemistry-based technology courses transfer as chemistry courses? | [ ]  Yes, to other two-year colleges[ ]  Yes, to four-year institutions[ ]  No |
| Who is involved in determining course content?  | [ ]  Individual chemistry faculty[ ]  Chemistry faculty, as a team[ ]  Other faculty at this institution[ ]  Faculty at other institutions[ ]  Employers  | [ ]  Administration[ ]  District or state[ ]  Other (specify): Click here to enter text. |

Development of student skills

| **Indicate which of the following student skills are addressed in chemistry-based technology courses.** (See Sections 5.6 and 7.1-7.7 of the *ACS Guidelines for Chemistry in Two-Year College Programs*, p. 18-19,25-29.) |
| --- |
| **Chemical safety**  |
| [ ]  | Recognizing/identifying/mitigating hazards | [ ]  | Use of personal protective equipment |
| [ ]  | Risk assessment | [ ]  | Storing and handling flammable, corrosive, and incompatible chemicals |
| [ ]  | Preparing for/responding to emergencies | [ ]  | Use of emergency and safety equipment |
| [ ]  | Safety regulations, knowledge and compliance | [ ]  | Ethics of safety |
| [ ]  | Waste management and disposal | [ ]  | Other (specify): Click here to enter text. |
| [ ]  | Locating and using hazard recognition information and systems | [ ]  | Other (specify): Click here to enter text. |
| **Problem-solving and critical thinking**  | **Communication** |
| [ ]  | Definition of problems | [ ]  | Written communication of technical information |
| [ ]  | Development of testable hypotheses | [ ]  | Oral communication of technical information |
| [ ]  | Experiment design | [ ]  | Visual representation of complex data sets |
| [ ]  | Experiment execution | [ ]  | Use of chemical structure drawing programs |
| [ ]  | Data, error, and information analysis | [ ]  | Use of poster and computerized presentation software |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Communication with academic, business, and other audiences |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Teamwork and leadership** | **Ethics** |
| [ ]  | Leadership of a diverse group | [ ]  | Objective and accurate presentation of results |
| [ ]  | Providing a clear vision for team | [ ]  | Sharing of ideas and information |
| [ ]  | Synthesis of individual contributions into complete product | [ ]  | Accurate and complete laboratory records |
| [ ]  | Contribution to team work | [ ]  | Credit and respect for all classmates, educators, colleagues, and others |
| [ ]  | Productive interaction with teammates | [ ]  | Comprehension of the health, safety and environmental impacts of work |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Chemical information**  | **Career preparation** |
| [ ]  | Chemical information identification and retrieval  | [ ]  | Networking |
| [ ]  | Critical evaluation of technical articles | [ ]  | Resume-writing |
| [ ]  | Analyzing, interpreting, and citing chemical literature | [ ]  | Interviewing |
| [ ]  | Data management and archiving | [ ]  | Expectations of the workplace |
| [ ]  | Recordkeeping/lab notebooks | [ ]  | Workplace environment  |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |

How is students’ chemical knowledge in chemistry-based technology courses assessed?

* Click here to enter text.

**How is student skills development in chemistry-based technology courses assessed?**

* Click here to enter text.

**How effective are the content, format, and teaching of chemistry-based technology courses.**

* Click here to enter text.

F. Chemistry for allied health/health sciences courses

(See Sections 5.1-5.5, 5.11, and 5.14 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 15-18, 20, 21-22, unless otherwise noted.)

***Course availability***

|  |
| --- |
| List the title(s) or code(s) for the course(s) that fit this category.[ ]  No courses fit this category* Click here to enter text.
 |
| How often are chemistry for allied health courses offered, on average? | [ ]  More than once per year[ ]  Once per year[ ]  Less than once per year | What is the total number of students enrolled in chemistry for allied health courses? | Click here to enter text. [ ] per term [ ] per year |

Course instruction

|  |  |  |  |
| --- | --- | --- | --- |
| What pedagogies are used in teaching chemistry for allied health lecture? | [ ]  Traditional lecture[ ]  Inquiry-based/POGIL[ ]  Flipped classroom[ ]  Online lecture[ ]  Blended lecture/lab[ ]  Other (specify: Click here to enter text.) | What pedagogies are used in teaching chemistry for allied health lab?  | [ ]  Traditional, hands-on[ ]  Inquiry-based, hands-on[ ]  Team-based, hands-on[ ]  At home (“kitchen chemistry”), hands-on [ ]  Computer simulations[ ]  Other (specify: Click here to enter text.) |
| How is chemistry for allied health instruction assessed?  | Click here to enter text. | **Is chemistry for allied health instruction consistent, in content and rigor, among all faculty?**  | [ ]  Yes[ ]  Somewhat[ ]  NoComments: Click here to enter text. |
| **Is student completion and performance in chemistry for allied health aligned with the goals of your program, department, program, and/or institutions?** [ ]  Yes [ ]  No***Comments***: Click here to enter text. |

Course content

|  |  |
| --- | --- |
| Do chemistry for allied health courses transfer as chemistry courses? | [ ]  Yes, to other two-year colleges[ ]  Yes, to four-year institutions[ ]  No |
| Who is involved in determining course content?  | [ ]  Individual chemistry faculty[ ]  Chemistry faculty, as a team[ ]  Other faculty at this institution[ ]  Faculty at other institutions[ ]  Employers  | [ ]  Administration[ ]  District or state[ ]  Other (specify): Click here to enter text. |

Development of student skills

| **Indicate which of the following student skills are addressed in chemistry for allied health courses.** (See Sections 5.6 and 7.1-7.7 of the *ACS Guidelines for Chemistry in Two-Year College Programs*, p. 18-19,25-29.) |
| --- |
| **Chemical safety**  |
| [ ]  | Recognizing/identifying/mitigating hazards | [ ]  | Use of personal protective equipment |
| [ ]  | Risk assessment | [ ]  | Storing and handling flammable, corrosive, and incompatible chemicals |
| [ ]  | Preparing for/responding to emergencies | [ ]  | Use of emergency and safety equipment |
| [ ]  | Safety regulations, knowledge and compliance | [ ]  | Ethics of safety |
| [ ]  | Waste management and disposal | [ ]  | Other (specify): Click here to enter text. |
| [ ]  | Locating and using hazard recognition information and systems | [ ]  | Other (specify): Click here to enter text. |
| **Problem-solving and critical thinking**  | **Communication** |
| [ ]  | Definition of problems | [ ]  | Written communication of technical information |
| [ ]  | Development of testable hypotheses | [ ]  | Oral communication of technical information |
| [ ]  | Experiment design | [ ]  | Visual representation of complex data sets |
| [ ]  | Experiment execution | [ ]  | Use of chemical structure drawing programs |
| [ ]  | Data, error, and information analysis | [ ]  | Use of poster and computerized presentation software |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Communication with academic, business, and other audiences |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Teamwork and leadership** | **Ethics** |
| [ ]  | Leadership of a diverse group | [ ]  | Objective and accurate presentation of results |
| [ ]  | Providing a clear vision for team | [ ]  | Sharing of ideas and information |
| [ ]  | Synthesis of individual contributions into complete product | [ ]  | Accurate and complete laboratory records |
| [ ]  | Contribution to team work | [ ]  | Credit and respect for all classmates, educators, colleagues, and others |
| [ ]  | Productive interaction with teammates | [ ]  | Comprehension of the health, safety and environmental impacts of work |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Chemical information**  | **Career preparation** |
| [ ]  | Chemical information identification and retrieval  | [ ]  | Networking |
| [ ]  | Critical evaluation of technical articles | [ ]  | Resume-writing |
| [ ]  | Analyzing, interpreting, and citing chemical literature | [ ]  | Interviewing |
| [ ]  | Data management and archiving | [ ]  | Expectations of the workplace |
| [ ]  | Recordkeeping/lab notebooks | [ ]  | Workplace environment  |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |

How is students’ chemical knowledge in chemistry for allied health courses assessed?

* Click here to enter text.

**How is student skills development in chemistry for allied health courses assessed?**

* Click here to enter text.

**How effective are the content, format, and teaching of chemistry for allied health courses.**

* Click here to enter text.

G. General education chemistry courses

(See Sections 5.1-5.5, 5.12, and 5.14 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 15-18, 21-22, unless otherwise noted.)

***Course availability***

|  |
| --- |
| List the title(s) or code(s) for the course(s) that fit this category.[ ]  No courses fit this category* Click here to enter text.
 |
| How often are general education chemistry courses offered, on average? | [ ]  More than once per year[ ]  Once per year[ ]  Less than once per year | What is the total number of students enrolled in general education chemistry courses? | Click here to enter text. [ ] per term [ ] per year |

Course instruction

|  |  |  |  |
| --- | --- | --- | --- |
| What pedagogies are used in teaching general education chemistry lecture? | [ ]  Traditional lecture[ ]  Inquiry-based/POGIL[ ]  Flipped classroom[ ]  Online lecture[ ]  Blended lecture/lab[ ]  Other (specify: Click here to enter text.) | What pedagogies are used in teaching general education chemistry lab?  | [ ]  Traditional, hands-on[ ]  Inquiry-based, hands-on[ ]  Team-based, hands-on[ ]  At home (“kitchen chemistry”), hands-on [ ]  Computer simulations[ ]  Other (specify: Click here to enter text.) |
| How is general education chemistry instruction assessed?  | Click here to enter text. | **Is general education chemistry instruction consistent, in content and rigor, among all faculty?**  | [ ]  Yes[ ]  Somewhat[ ]  NoComments: Click here to enter text. |
| **Is student completion and performance in general education chemistry aligned with the goals of your program, department, program, and/or institutions?** [ ]  Yes [ ]  No***Comments***: Click here to enter text. |

Course content

|  |  |
| --- | --- |
| Do general education chemistry courses transfer as chemistry courses? | [ ]  Yes, to other two-year colleges[ ]  Yes, to four-year institutions[ ]  No |
| Who is involved in determining course content?  | [ ]  Individual chemistry faculty[ ]  Chemistry faculty, as a team[ ]  Other faculty at this institution[ ]  Faculty at other institutions[ ]  Employers  | [ ]  Administration[ ]  District or state[ ]  Other (specify): Click here to enter text. |

Development of student skills

| **Indicate which of the following student skills are addressed in general education chemistry courses.** (See Sections 5.6 and 7.1-7.7 of the *ACS Guidelines for Chemistry in Two-Year College Programs*, p. 18-19,25-29.) |
| --- |
| **Chemical safety**  |
| [ ]  | Recognizing/identifying/mitigating hazards | [ ]  | Use of personal protective equipment |
| [ ]  | Risk assessment | [ ]  | Storing and handling flammable, corrosive, and incompatible chemicals |
| [ ]  | Preparing for/responding to emergencies | [ ]  | Use of emergency and safety equipment |
| [ ]  | Safety regulations, knowledge and compliance | [ ]  | Ethics of safety |
| [ ]  | Waste management and disposal | [ ]  | Other (specify): Click here to enter text. |
| [ ]  | Locating and using hazard recognition information and systems | [ ]  | Other (specify): Click here to enter text. |
| **Problem-solving and critical thinking**  | **Communication** |
| [ ]  | Definition of problems | [ ]  | Written communication of technical information |
| [ ]  | Development of testable hypotheses | [ ]  | Oral communication of technical information |
| [ ]  | Experiment design | [ ]  | Visual representation of complex data sets |
| [ ]  | Experiment execution | [ ]  | Use of chemical structure drawing programs |
| [ ]  | Data, error, and information analysis | [ ]  | Use of poster and computerized presentation software |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Communication with academic, business, and other audiences |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Teamwork and leadership** | **Ethics** |
| [ ]  | Leadership of a diverse group | [ ]  | Objective and accurate presentation of results |
| [ ]  | Providing a clear vision for team | [ ]  | Sharing of ideas and information |
| [ ]  | Synthesis of individual contributions into complete product | [ ]  | Accurate and complete laboratory records |
| [ ]  | Contribution to team work | [ ]  | Credit and respect for all classmates, educators, colleagues, and others |
| [ ]  | Productive interaction with teammates | [ ]  | Comprehension of the health, safety and environmental impacts of work |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Chemical information**  | **Career preparation** |
| [ ]  | Chemical information identification and retrieval  | [ ]  | Networking |
| [ ]  | Critical evaluation of technical articles | [ ]  | Resume-writing |
| [ ]  | Analyzing, interpreting, and citing chemical literature | [ ]  | Interviewing |
| [ ]  | Data management and archiving | [ ]  | Expectations of the workplace |
| [ ]  | Recordkeeping/lab notebooks | [ ]  | Workplace environment  |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |

How is students’ chemical knowledge in general education chemistry courses assessed?

* Click here to enter text.

**How is student skills development in general education chemistry courses assessed?**

* Click here to enter text.

**How effective are the content, format, and teaching of general education chemistry courses.**

* Click here to enter text.

H. Other specialty chemistry courses

(See Sections 5.1-5.5, 5.13, and 5.14 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 15-18,21-22, unless otherwise noted.)

***Course availability***

|  |
| --- |
| List the title(s) or code(s) for the course(s) that fit this category.[ ]  No courses fit this category* Click here to enter text.
 |
| How often are other chemistry courses offered, on average? | [ ]  More than once per year[ ]  Once per year[ ]  Less than once per year | What is the total number of students enrolled in other chemistry courses? | Click here to enter text. [ ] per term [ ] per year |

Course instruction

|  |  |  |  |
| --- | --- | --- | --- |
| What pedagogies are used in teaching other chemistry lecture? | [ ]  Traditional lecture[ ]  Inquiry-based/POGIL[ ]  Flipped classroom[ ]  Online lecture[ ]  Blended lecture/lab[ ]  Other (specify: Click here to enter text.) | What pedagogies are used in teaching other chemistry lab?  | [ ]  Traditional, hands-on[ ]  Inquiry-based, hands-on[ ]  Team-based, hands-on[ ]  At home (“kitchen chemistry”), hands-on [ ]  Computer simulations[ ]  Other (specify: Click here to enter text.) |
| How is other chemistry instruction assessed?  | Click here to enter text. | **Is other chemistry instruction consistent, in content and rigor, among all faculty?**  | [ ]  Yes[ ]  Somewhat[ ]  NoComments: Click here to enter text. |
| **Is student completion and performance in other chemistry aligned with the goals of your program, department, program, and/or institutions?** [ ]  Yes [ ]  No***Comments***: Click here to enter text. |

Course content

|  |  |
| --- | --- |
| Do other chemistry courses transfer as chemistry courses? | [ ]  Yes, to other two-year colleges[ ]  Yes, to four-year institutions[ ]  No |
| Who is involved in determining course content?  | [ ]  Individual chemistry faculty[ ]  Chemistry faculty, as a team[ ]  Other faculty at this institution[ ]  Faculty at other institutions[ ]  Employers  | [ ]  Administration[ ]  District or state[ ]  Other (specify): Click here to enter text. |

Development of student skills

| **Indicate which of the following student skills are addressed in other chemistry courses.** (See Sections 5.6 and 7.1-7.7 of the *ACS Guidelines for Chemistry in Two-Year College Programs*, p. 18-19,25-29.) |
| --- |
| **Chemical safety**  |
| [ ]  | Recognizing/identifying/mitigating hazards | [ ]  | Use of personal protective equipment |
| [ ]  | Risk assessment | [ ]  | Storing and handling flammable, corrosive, and incompatible chemicals |
| [ ]  | Preparing for/responding to emergencies | [ ]  | Use of emergency and safety equipment |
| [ ]  | Safety regulations, knowledge and compliance | [ ]  | Ethics of safety |
| [ ]  | Waste management and disposal | [ ]  | Other (specify): Click here to enter text. |
| [ ]  | Locating and using hazard recognition information and systems | [ ]  | Other (specify): Click here to enter text. |
| **Problem-solving and critical thinking**  | **Communication** |
| [ ]  | Definition of problems | [ ]  | Written communication of technical information |
| [ ]  | Development of testable hypotheses | [ ]  | Oral communication of technical information |
| [ ]  | Experiment design | [ ]  | Visual representation of complex data sets |
| [ ]  | Experiment execution | [ ]  | Use of chemical structure drawing programs |
| [ ]  | Data, error, and information analysis | [ ]  | Use of poster and computerized presentation software |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Communication with academic, business, and other audiences |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Teamwork and leadership** | **Ethics** |
| [ ]  | Leadership of a diverse group | [ ]  | Objective and accurate presentation of results |
| [ ]  | Providing a clear vision for team | [ ]  | Sharing of ideas and information |
| [ ]  | Synthesis of individual contributions into complete product | [ ]  | Accurate and complete laboratory records |
| [ ]  | Contribution to team work | [ ]  | Credit and respect for all classmates, educators, colleagues, and others |
| [ ]  | Productive interaction with teammates | [ ]  | Comprehension of the health, safety and environmental impacts of work |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |
| **Chemical information**  | **Career preparation** |
| [ ]  | Chemical information identification and retrieval  | [ ]  | Networking |
| [ ]  | Critical evaluation of technical articles | [ ]  | Resume-writing |
| [ ]  | Analyzing, interpreting, and citing chemical literature | [ ]  | Interviewing |
| [ ]  | Data management and archiving | [ ]  | Expectations of the workplace |
| [ ]  | Recordkeeping/lab notebooks | [ ]  | Workplace environment  |
| [ ]  | Other (specify): Click here to enter text. | [ ]  | Other (specify): Click here to enter text. |

How is students’ chemical knowledge in other chemistry courses assessed?

* Click here to enter text.

**How is student skills development in other chemistry courses assessed?**

* Click here to enter text.

**How effective are the content, format, and teaching of other chemistry courses.**

* Click here to enter text.

I. Development outside of coursework

Describe any opportunities students have to develop chemistry and student skills outside of chemistry courses.

* Click here to enter text.

Describe how chemistry and student skills are assessed outside of chemistry courses, if applicable.

* Click here to enter text.

Describe the effectiveness of students’ opportunities to develop chemistry and student skills outside of chemistry courses.

* Click here to enter text.

J. Course scheduling and development

(See Section 5.15 of the ACS Guidelines for Chemistry in Two-Year College Programs, p. 15-18,19, unless otherwise noted.)

1. **Indicate your agreement with the following statements.**

|  |
| --- |
| The faculty have influence over the days, times, and how many sections of each course are taught.[ ]  Agree [ ]  Disagree [ ]  Not applicable |
| *Briefly explain:* Click here to enter text. |
| The faculty have influence over how many students are allowed per lecture/laboratory section.[ ]  Agree [ ]  Disagree [ ]  Not applicable |
| *Briefly explain:* Click here to enter text. |
| Course scheduling allows students to complete all needed chemistry courses in a timely fashion. [ ]  Agree [ ]  Disagree [ ]  Not applicable |
| *Briefly explain:* Click here to enter text. |
| Curriculum content provides students with sufficient skills and knowledge to support their academic and professional goals. [ ]  Agree [ ]  Disagree [ ]  Not applicable |
| *Briefly explain:* Click here to enter text. |

1. **Briefly describe the most effective practices pertaining to course development and scheduling at your institution.**

Click here to enter text.

1. **Briefly describe the least effective practices pertaining to course development and scheduling at your institution.**

Click here to enter text.

Provide any additional comments on the chemistry and/or chemistry-based technology curriculum.

 Click here to enter text.