

# Guidelines, Instructions, & Examples for Annual Assessment Reports for IFT – Approved Undergraduate Food Science and Food Technology Programs

Updated April 2024





This document provides guidance to IFT – approved undergraduate programs on the preparation and submission of Annual Assessment Reports, which are required on an annual basis during the 5-year approval period. Additional support materials will be available on [IFT.org](http://IFT.org).

## Table of Contents

<b>Annual Requirements for Maintaining IFT Approval</b> .....	<b>3</b>
<b>General Information</b> .....	<b>3</b>
<b>Preparing Annual Assessment Reports</b> .....	<b>3</b>
<b>Data Collection Period and Submission Timeline</b> .....	<b>3</b>
<b>Annual Assessment Report Criteria</b> .....	<b>4</b>
<b>Review of Annual Assessment Reports by the Higher Education Review Board (HERB)</b> .....	<b>5</b>
<b>Assessment Year 1-4 – INSTRUCTIONS</b> .....	<b>6</b>
<b>Assessment Year 1-4 – EXAMPLES</b> .....	<b>8</b>
<b>Created Example:</b> .....	<b>8</b>
<b>Real Institutional Examples from Assessment Year 1 2022 Review</b> .....	<b>9</b>
<b>Institution 1:</b> .....	<b>9</b>
<b>Institution 2:</b> .....	<b>11</b>
<b>Resources</b> .....	<b>13</b>

## Annual Requirements for Maintaining IFT Approval

### General Information

As a condition for maintaining IFT Approval, each program that received Initial Approval in 2020 or later must submit an Assessment Report on an annual basis by **October 1<sup>st</sup>** of each year, starting in 2022 (given the gap in assessment due to the COVID pandemic) (see Figure 1), until Five-Year Reapproval. Annual Assessment Reports must include assessment data collected for each Essential Learning Outcome (ELO) indicated in the five-year assessment plan that was submitted with the application for Initial IFT Approval. All Annual Assessment Reports will be submitted via the same online submission portal as the Initial Approval applications.

### Preparing Annual Assessment Reports

In the application for Initial IFT Approval, all programs identified a five-year assessment plan according to the following requirements:

- All Eleven (11) Standards must be covered across Assessment Years 1-5.
- Two (2) Standards per year will be covered for Assessment Years 1-4, with three (3) corresponding ELOs assessed per Standard.
- Three (3) Standards will be covered for Assessment Year 5, with two (2) corresponding ELOs assessed per Standard.
- By the end of Assessment Year 5, the assessment plan should include a total of 11 Standards and 30 ELOs.

Annual Assessment Reports will only include documentation related to assessment data and *will not* revisit the following sections:

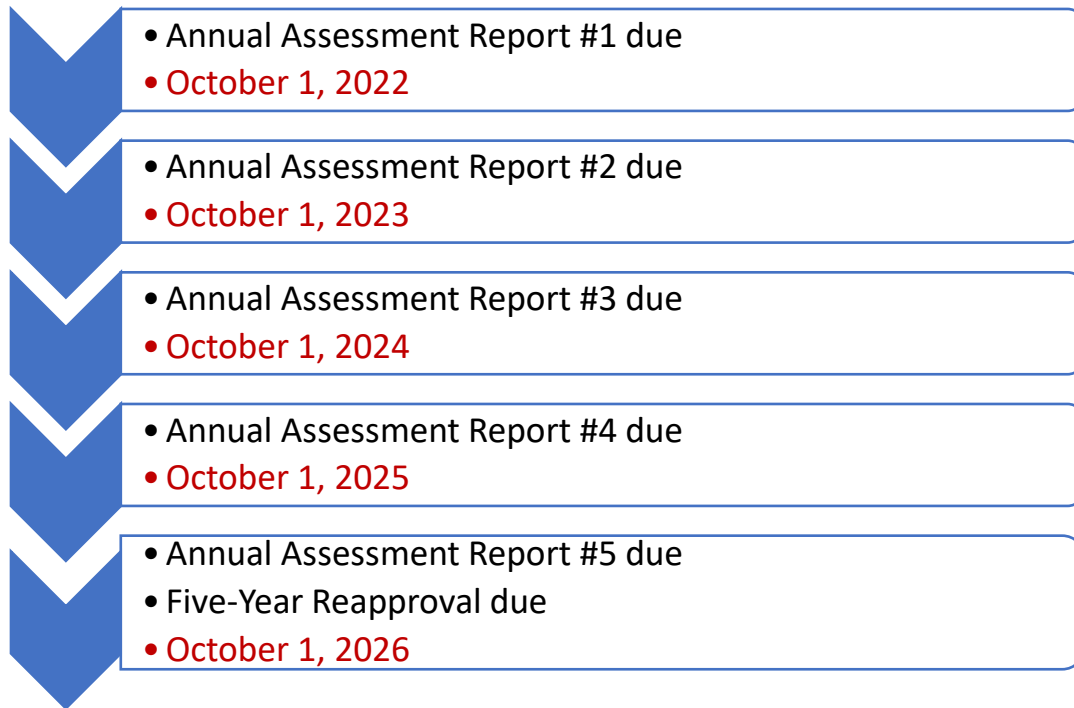
- Institutional profile
- Food science facilities
- Undergraduate teaching faculty
- Foundational content
- IFT defined program goals

*[Note: Programs will have the option to update the above sections with minor changes that may have occurred since initial submission. Updates to these sections will be required at the time of Five-Year Reapproval.]*

### Data Collection Period and Submission Timeline

Data to be included in Annual Assessment Reports must have been collected within the timeframe of the five-year approval period. Data collected prior to Initial IFT Approval is *not* to be included.

Figure 1: Example: Annual Assessment Report submission schedule for programs approved 2020-2026.



## Annual Assessment Report Criteria

### What to Include in Annual Assessment Reports – YEARS 1-4

1. Standard 1, Essential Learning Outcome (ELO) 1
  - ✓ ELO measured
  - ✓ **Exactly two different** Learning Assessment Techniques (LATs) used to assess this ELO  
*[Note: It is recommended but not required to use LATs from the [provided list](#)]*
  - ✓ Description of how each of the two LATs was implemented with students to assess this ELO
    - Recommended to include: number of students the LAT was administered to; how LAT was administered (whole class/group/individual, etc.); duration of LAT (minutes/hours/weeks, etc.); location of LAT (in-class, take-home, etc.)
  - ✓ Description of the tool(s) used for LAT analysis (e.g. exam key, rubric, checklist, etc.)
  - ✓ Key Findings for each of the two LATs
    - Recommended to include: breakdown of the grading system (e.g. points/percentages/select exam questions); class averages; rubric breakdowns
  - ✓ Interpretation of key findings in connection to student learning
  - ✓ Description of how student performance related to expectations
  - ✓ At the end of each *standard*: description of what could be done differently next year to further improve student performance on the standard
2. Repeat above steps for the remaining Standards and ELOs:
  - ✓ Standard 1, ELO 2
  - ✓ Standard 1, ELO 3
  - ✓ Standard 2, ELO 1

- ✓ Standard 2, ELO 2
- ✓ Standard 2, ELO 3

[Check that you have a total of 2 Standards, 6 ELOs, and 12 LATs per year during Assessment Years 1-4.]

#### What to Include in Annual Assessment Reports – YEAR 5

[Note: The Annual Assessment Report in Year 5 will be part of the larger Five-Year Reapproval submission].

3. Standard 1, Essential Learning Outcome (ELO) 1
  - ✓ ELO measured
  - ✓ **Exactly two different** Learning Assessment Techniques (LATs) used to assess this ELO  
[Note: It is recommended but not required to use LATs from the [provided list](#)]
  - ✓ Description of how each of the two LATs was implemented with students to assess this ELO
    - Recommended to include: Number of students the LAT was administered to; how LAT was administered (whole class/group/individual, etc.); duration of LAT (minutes/hours/weeks, etc.); location of LAT (in-class, take-home, etc.)
  - ✓ Description of the tool(s) used for LAT analysis (e.g. exam key, rubric, checklist, etc.)
  - ✓ Key Findings for each of the two LATs
    - Recommended to include at least two of the following: breakdown of the grading system (e.g. points/percentages/select exam questions); class averages; rubric breakdowns
  - ✓ Interpretation of key findings in connection to student learning
  - ✓ Description of how student performance related to expectations
  - ✓ At the end of each *standard*: description of what could be done differently next year to further improve student performance on the standard
  
4. Repeat above steps for the remaining Standards and ELOs:
  - ✓ Standard 1, ELO 2
  - ✓ Standard 2, ELO 1
  - ✓ Standard 2, ELO 2
  - ✓ Standard 3, ELO 1
  - ✓ Standard 3, ELO 2

[Check that you have a total of 3 Standards, 6 ELOs, and 12 LATs for Assessment Year 5. Note that additional materials for Five-Year Reapproval will be required in Year 5. Details will be outlined in the Five-Year Reapproval Guidelines, release date TBD.]

### Review of Annual Assessment Reports by the Higher Education Review Board (HERB)

The HERB will review all Annual Assessment Reports using a review instrument that will be available to all programs. HERB members will undergo reviewer calibration or inter-rater reliability training to ensure a high degree of agreement and consistency among reviews while minimizing variability among these.

## Assessment Year 1-4 – INSTRUCTIONS

\*The Year 5 process is different as outlined above and will be communicated when institutions reach that milestone.

Standard \_\_\_\_, Essential Learning Outcome (ELO) \_\_\_\_

<b>What to Include</b>	<b>Additional Information</b>
<b>Is Standard ____ and corresponding Essential Learning Outcomes (ELOs) for Year ____ different than indicated in the original 5-Year Assessment Plan?</b>	Refer back to the 5-Year Assessment Plan – this Standard was to be addressed in Assessment Year 1-5 to determine if this answer is Yes or No
<b>Standard</b>	Refer back to the 5-Year Assessment Plan – this Standard was to be addressed in Assessment Year 1-5
<b>ELO assessed</b>	Refer back to the 5-Year Assessment Plan – this ELO was to be assessed in Assessment Year 1-5
<b>Course ELO was assessed in</b>	Include course name and course code/number
<b>Period ELO was assessed</b>	Include semester (or equivalent) and year
<b>Name of LAT 1</b>	Examples include: exam, debate, clickers, capstone project, etc.
<b>Description of LAT 1</b>	It is recommended but not required to use LATs from the <a href="#">provided list</a> .
<b>Description of how LAT 1 was implemented with students</b>	Recommended to include: <ul style="list-style-type: none"> <li>✓ Number of students the LAT was administered to</li> <li>✓ How LAT was administered (whole class/group/individual, etc.)</li> <li>✓ Duration of LAT (minutes/hours/weeks, etc.)</li> <li>✓ Location of LAT (in-class, take-home, etc.)</li> </ul>
<b>Description of the tool(s) used for LAT 1 analysis</b>	Recommended to include: <ul style="list-style-type: none"> <li>✓ Exam key, rubric, checklist, etc.</li> </ul>
<b>Key Findings for LAT 1</b>	Recommended to include: <ul style="list-style-type: none"> <li>✓ Breakdown of the grading system (e.g. points/percentages/select exam questions)</li> <li>✓ Class averages</li> <li>✓ Rubric breakdowns</li> </ul>
<b>Description of how student performance for LAT 1 related to expectations for Standard ____ ELO ____</b>	Brief description of how the data met the ELO.

You will complete another set of questions for the same standard and ELO for LAT 2:

<b>What to Include</b>	<b>Additional Information</b>
<b>Name of LAT 2</b>	Examples include: exam, debate, clickers, capstone project, etc.
<b>Description of LAT 2</b>	It is recommended but not required to use LATs from the <a href="#">provided list</a> .
<b>Description of how LAT 2 was implemented with students</b>	Recommended to include: <ul style="list-style-type: none"> <li>✓ Number of students the LAT was administered to</li> <li>✓ How LAT was administered (whole class/group/individual, etc.)</li> <li>✓ Duration of LAT (minutes/hours/weeks, etc.)</li> <li>✓ Location of LAT (in-class, take-home, etc.)</li> </ul>
<b>Description of the tool(s) used for LAT 2 analysis</b>	Recommended to include: <ul style="list-style-type: none"> <li>✓ Exam key, rubric, checklist, etc.</li> </ul>
<b>Key Findings for LAT 2</b>	Recommended to include: <ul style="list-style-type: none"> <li>✓ Breakdown of the grading system (e.g. points/percentages/select exam questions)</li> <li>✓ Class averages</li> <li>✓ Rubric breakdowns</li> </ul>
<b>Description of how student performance for LAT 2 related to expectations for Standard _____ ELO _____</b>	Brief description of how the data met the ELO and what expectations were for student performance.
<b>What could you do differently next year to further improve student performance on this standard?</b>	<b>This question will appear at the end of each STANDARD (not ELO).</b>  Brief description of how the data will be used to improve upon the ELO, learnings from previous assessment years, and how those learnings were implemented to improve student mastery.

5. Repeat above steps for the remaining Standards and ELOs:
  - ✓ Standard 1, ELO 2
  - ✓ Standard 1, ELO 3
  - ✓ Standard 2, ELO 1
  - ✓ Standard 2, ELO 2
  - ✓ Standard 2, ELO 3

**[For Assessment Years 1-4, ensure that you have a total of 2 Standards, 6 ELOs, and 12 LATs]**

## Assessment Year 1-4 – EXAMPLES

### Created Example:

#### Standard 1, Essential Learning Outcome (ELO) 1 – LAT 1

<b><i>What to Include</i></b>	<b><i>Example Scenario</i></b>
<b>Standard</b>	Food Microbiology (FM)
<b>ELO assessed</b>	FM 3: Apply laboratory techniques to identify microorganisms in foods
<b>Course ELO was assessed in</b>	Food Microbiology Lecture (FM 350) and Lab (FM 378)
<b>Period ELO was assessed</b>	Fall 2021
<b>Name of LAT 1</b>	<i>LAT 1: Pro and Con Grid</i>
<b>Description of LAT 1</b>	<i>LAT 1 (Pro and con grid): Rubric, 5-point scale</i>
<b>Description of how LAT 1 was implemented with students</b>	<i>LAT 1 (Pro and con grid): administered to a group of 19 students enrolled in FM 378; students had 20 minutes to complete the assignment during class.</i>
<b>Description of the tool(s) used for LAT 1 analysis</b>	<i>LAT 1 (Pro and con grid): 11/19 (57.9%) students scored 4-5 points; 6/19 (31.6%) students scored 2-3 points, and 2/19 (10.5%) scored lower than 2 points.</i>
<b>Key Findings for LAT 1</b>	<i>LAT 1 (Pro and con grid): Our first data point indicates that ELO FM3 was met, as more than half of the students scored within the highest point range of the rubric.</i>
<b>Description of how student performance for LAT 1 related to expectations for Standard ____ ELO ____</b>	Based on the inconsistency of our 2 data points, we plan on the following: <ul style="list-style-type: none"> <li>• supplement the Pro and Con grid with a formative debate to gain more insight into student learning</li> <li>• revisit assessment instruments for validity</li> </ul>

#### Standard 1, Essential Learning Outcome (ELO) 1 – LAT 2

<b><i>What to Include</i></b>	<b><i>Example Scenario</i></b>
<b>Name of LAT 2</b>	<i>LAT 2: Quiz Question</i>
<b>Description of LAT 2</b>	<i>LAT 2 (Quiz question, short response): Rubric, 5-point scale</i>
<b>Description of how LAT 2 was implemented with students</b>	<i>LAT 2 administered to a group of 42 students enrolled in FM 350; students had 30 minutes to complete the entire quiz of 10 questions. Data reported here are from one question directly related to ELO FM3.</i>
<b>Description of the tool(s) used for LAT 2 analysis</b>	<i>LAT 2 (Quiz question, short response): 14% of the 42 students scored 4-5 points; 27% scored 2-3 points,</i>



	and 59% scored below 2 points.
<b>Key Findings for LAT 2</b>	<i>LAT 2</i> (Quiz question, short response): Our second data point does not indicate that ELO FM3 was met, as the majority if students scored within the lowest range of the rubric.
<b>Description of how student performance for LAT 2 related to expectations for Standard ____ ELO</b>	Based on the inconsistency of our 2 data points, we plan on the following: <ul style="list-style-type: none"> <li>revisit both assessment instruments for validity</li> </ul>
<b>What could you do differently next year to further improve student performance on this standard?</b>	<b>This question will appear at the end of each STANDARD (not ELO).</b>  While we attempted to implement a non-traditional assessment (pro-con grid) as outlined in LATs <a href="#">provided list</a> we also find value in the more traditional assessments such as quiz questions. As noted in the master data with more than half of students scoring below 2 points, we need to reassess our students on the covered information.

## Real Institutional Examples from Assessment Year 1 2022 Review

These examples come from real submissions by institutions who provided particularly robust responses in their Assessment Year 1 applications. The identifying information has been anonymized but the responses are true to what the institutions submitted.

### Institution 1:

#### Standard 1, Essential Learning Outcome (ELO) 1, LAT 1

<b><i>What to Include</i></b>	<b><i>Example Scenario</i></b>
<b>Standard</b>	Food Chemistry (FC)
<b>ELO assessed</b>	FC 1 discuss the major chemical reactions that limit shelf life of foods
<b>Course ELO was assessed in</b>	Food Chem 410 (Food Chemistry and Analysis)
<b>Period ELO was assessed</b>	Fall 2021
<b>Name of LAT 1</b>	<i>LAT 1</i> : Exam - Objective test items, summative
<b>Description of LAT 1</b>	<i>LAT 1</i> (Exam): This LAT was administered to 46 students enrolled in Food Chem 410 as part of an in class exam (50 min). The four questions of which related to water activity and expected chemical reaction rates that limit shelf life (i.e., lipid oxidation and Maillard browning) were used as the LAT.
<b>Description of how LAT 1 was implemented with students</b>	<i>LAT 1</i> (Exam): This LAT was administered to 46 students enrolled in Food Chem 410 as part of an in class exam (50 min).
<b>Description of the tool(s) used for LAT 1 analysis</b>	<i>LAT 1</i> (Exam): Rubric - Answering at least $\frac{3}{4}$ of the questions was considered proficiency with the topic

<b>Key Findings for LAT 1</b>	<i>LAT 1 (Exam):</i> Of the 46 students administered the exam 82% answered at least $\frac{3}{4}$ of the questions correctly. Of those who did not answer $\frac{3}{4}$ correctly only one student answered less than half correctly.
<b>Description of how student performance for LAT 1 related to expectations for Standard 1 ELO 1</b>	<i>LAT 1 (Exam):</i> These data indicate that this ELO was met. While the students answered the questions related to water activity and the chemistry of shelf life well there is an opportunity to expand the relation of shelf life to a greater number of topics taught in this class. While it can at times be difficult as students are becoming acquainted with many of the compounds discussed for the first-time additional examples can be integrated and expanded. One such example that can be expanded relates to bread staling.

### **Institution 1:**

#### **Standard 1, Essential Learning Outcome (ELO) 1, LAT 2**

<b><i>What to Include</i></b>	<b><i>Example Scenario</i></b>
<b>Name of LAT 2</b>	<i>LAT 2: Lab Report</i> Open-ended questions, summative.
<b>Description of LAT 2</b>	<i>LAT 2 (Lab Report):</i> This was a take-home exercise completed over the course of a week. Students were asked "In a multicomponent food such as cheese and crackers what is a strategy to maintain shelf life, what chemical changes might you expect that would not have been likely if the components were kept separate."
<b>Description of how LAT 2 was implemented with students</b>	<i>LAT 2 (Lab Report):</i> This assignment was administered to a group of 46 students enrolled in Food Chem 410. The question was administered as part of their lab report.
<b>Description of the tool(s) used for LAT 2 analysis</b>	<i>LAT 2 (Lab Report):</i> Rubric
<b>Key Findings for LAT 2</b>	<i>LAT 2 (Lab Report):</i> 91% of students received full points for their answer on the multipart open-ended question outlined above. Of those students who did not receive credit all did not turn in the lab report or turned in a partial report. Overall, they demonstrated excellent ability at applying their knowledge of food chemistry to this practical application of shelf life.
<b>Description of how student performance for LAT 2 related to expectations for Standard 1 ELO 1</b>	<i>LAT 2 (Lab Report):</i> These data indicate that this ELO was met. Currently all labs in Food Chem 410 are 1-2 weeks making it difficult to demonstrate many things related to shelf life. It could be valuable to tie in a lab in this fall course, to the second semester food chem and

	analysis course (Food Chem 412), for students to monitor a change in chemistry (and quality) over time.
<b>What could you do differently next year to further improve student performance on this standard?</b>	<i>This question was revised in 2024, so there is no answer from this submission.</i>

## Institution 2:

### Standard 2, Essential Learning Outcome (ELO) 1, LAT 1

<b>What to Include</b>	<b>Example Scenario</b>
<b>Standard</b>	Food Chemistry (FC)
<b>ELO assessed</b>	FC 4 demonstrate laboratory techniques common to basic and applied food chemistry
<b>Course ELO was assessed in</b>	CHEM 1081-Food Chemistry
<b>Period ELO was assessed</b>	Year 2 - Term 1, 2022
<b>Name of LAT 1</b>	<i>LAT 1: Triple Jump/Open-Ended Essay (Final Exam)</i>
<b>Description of LAT 1</b>	<i>LAT 1 (Essay): This assessed students' understanding of how to solve real world problems in food chemistry, through data analysis, short and long answer questions, and drawing chemical equations and mechanisms.</i>
<b>Description of how LAT 1 was implemented with students</b>	<i>LAT 1 (Essay): This LAT was administered on 64 students via an online, open book final exam which assessed students' understanding of how to solve real world problems in food chemistry through data analysis, short and long answer questions, and drawing chemical equations and mechanisms. Students are required to explain the techniques they would use to solve the problem, which often include chemical analysis and manipulation. As a result, they are required to show their understanding of common food chemistry lab techniques, analyze model data or explain how to troubleshoot experiments to obtain useful data (Whole class test, 2 hr, online (at home), open book).</i>
<b>Description of the tool(s) used for LAT 1 analysis</b>	<p><i>LAT 1 (Essay): Online assessment platform, mixture of essay and drawing questions, exam key used for marking.</i></p> <p>1. Exam marking key had marks assigned for each section of the questions. 4 questions assessed this ELO. Q1. Worth 2 marks, average was 62%, 17% of students achieved an HD grade (80% or above) on this question. Q2. Worth 12 marks, average was 50%, 15% of</p>

	<p>students achieved an HD grade (80% or above) on this question.</p> <p>Q3. Worth 5 marks, average of 33%, 17% of students achieved an HD grade (80% or above) on this question</p> <p>Q4. Worth 3 marks, average of 58%, 39% of students received an HD grade (80% or above) on this question.</p>
<b>Key Findings for LAT 1</b>	<i>LAT 1 (Exam):</i> The LAT was sufficient to assessment students' understanding of the analytical techniques that are commonly used in basic and applied food chemistry, shown by the good performance in the LATs, especially the lab reports, which require more depth of thought and analysis.
<b>Description of how student performance for LAT 1 related to expectations for Standard 2 ELO 1</b>	<i>LAT 1 (Exam):</i> While the students answered the questions related to water activity and the chemistry of shelf life well there is an opportunity to expand the relation of shelf life to a greater number of topics taught in this class. While it can at times be difficult as students are becoming acquainted with many of the compounds discussed for the first-time additional examples can be integrated and expanded. One such example that can be expanded relates to bread staling.

### Institution 2:

#### **Standard 2, Essential Learning Outcome (ELO) 1, LAT 2**

<b><i>What to Include</i></b>	<b><i>Example Scenario</i></b>
<b>Name of LAT 2</b>	<i>LAT 2: "Consider This"/" Synthesis paper" (Lab experiment and report).</i>
<b>Description of LAT 2</b>	<i>LAT 2 (Lab Report):</i> Lab manual for guidance, lab report template, lab report rubric, marking guide for demonstrators.
<b>Description of how LAT 2 was implemented with students</b>	<p><i>LAT 2 (Lab Report):</i> Each lab experiment and report focuses on current analytical techniques used in the food industry. The lab requires students to perform these techniques and the report asks clarification questions where students must show their understanding of the technique, how it works, how it might go wrong and how they might trouble-shoot any errors.</p> <p>This is the same in the lab report where students are asked short answer questions on various aspects of the techniques and must demonstrate they know how these techniques work and can explain their use. This builds their understanding in the common food chemistry techniques. (Whole class lab (64 students), duration of 4 hours, experiment in-class, individual report is take-home, due 1 week after the experiment).</p>

<p><b>Description of the tool(s) used for LAT 2 analysis</b></p>	<p>LAT 2 (Lab Report): Rubric was broken down into 5 categories – Absent/developing/competent/good/outstanding. The average mark for all lab reports was 66% and 52% of the class achieved a HD grade (80% or above).</p>
<p><b>Key Findings for LAT 2</b></p>	<p>LAT 2 (Lab Report): This LAT is sufficient to assess students' understanding the analytical techniques that are commonly used in basic and applied food chemistry, shown by the good performance in the LATs, especially the lab reports, which require more depth of thought and analysis.</p> <p>The assessment task asks students to consider and explain the techniques to demonstrate their understanding.</p>
<p><b>Description of how student performance for LAT 2 related to expectations for Standard 2 ELO 1</b></p>	<p>LAT 2 (Lab Report): Student performance in the final exam shows that they reflect on their learning during the teaching period and can adequately explain the techniques at the end of the period.</p>
<p><b>What could you do differently next year to further improve student performance on this standard?</b></p>	<p><i>This question was revised in 2024, so there is no answer from this submission.</i></p>

## Resources

For general information and resources on IFT-HERB approval, please visit:  
<https://www.ift.org/community/educators/ift-undergraduate-program-approval>

For questions about matters related to IFT-HERB Approval, contact Christina Ginardi at  
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