

2011-2012 Assessment Plan for Food Science - B.S.F.S.

[Learning Outcomes](#) [2010-11 Snapshot \(read only\)](#) 2011-12 Current Cycle [2012-13 Next Cycle](#)

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Learning Outcome(s) [Edit](#)

Identifies, summarizes, and defines the issue or problem at hand. Clearly states purposes, objectives, or hypotheses. [Edit](#)

Aligns with University Learning Outcome(s):
Learn and Integrate
Communicate

Assessment Tools and Procedures [Edit](#)

Direct Measure

A test question from the final examination in FS 303 Food Processing and a sensory analysis design assignment from FS 489 Food Product Development were assessed using a rubric.

Indirect Measure

Online Survey of food science alumni with regards to FS 303, FS 462, and FS 470. Data collected: Online survey data collected: 1. Demographic, instructor and employment. 2. Perceptions of course efficacy. 3. Perception of critical thinking skill development. 4. Overall course and instructor evaluation. 5. Rating of career preparation with respect to University level learning goals 6. Rating of career preparation with respect to University level learning goals WSU-based online advising and senior exit surveys

Face-to-Face Measures

None planned or performed

Benchmarks [Edit](#)

Direct Benchmarks

100% Meet Accept level criteria and 75% Meet Outstanding level criteria according to rubric

Indirect Benchmarks

No specific benchmarks.

Findings [Edit](#)

Direct Findings

As demonstrated in FS 303 Food Processing using a final exam question with potential multiple acceptable answers, students need improved instruction and practice in clearly identifying and defining complex problems involving food processing. From FS 489, a better assignment needs to be used to assess SLO.

Indirect Findings

FS 303: • Increased interaction with more types of processing equipment • More instruction in packaging technology • Need for more quantitative reasoning and development of problem solving/critical thinking skills related to food processing. • Inclusion of statistical process control in FS 303 or FS 470. FS 462: • Need for modernization of course to use analyses and instruments used in food processing industry. • Need for more critical thinking skill development. • Lack of integration with other courses in curriculum. FS 470: • Course lack focus or common theme. Course needs to be broken into an advance processing course and a food safety course. • Respondents commented that there should be more quantitative problem solving involving advanced processing technologies. • More active learning opportunities should be provided as opposed to primarily a lecture based course. Response rates for the surveys were too low to use.

Face-to-Face Findings

Curricular and Co-Curricular Changes to be Made [Edit](#)

Recommendations: Include more specific problem-based instruction and case study style instruction in FS 110 Introduction to Food Science, FS 220 Food Safety and quality, and FS 303. Work with FS 489 instructor to develop assignment to assess the SLO. Actions: Instructor of FS 303 plans to include two more class meetings that involve open-ended, in-class group problems. Director of School of Food Science will direct instructors of FS 110 and FS 220 to adjust course curriculum to include examples of problems solving in food science. Revise assignment and reassess next year. Communicate individual course findings to instructors and Food Science undergraduate curriculum committee. In response to low online survey response rates, Use paper base survey using tool used at UI. After advising session, one page survey is provided to student. Registration hold is only removed upon return of survey. ATL (WSU) or Vandal Visions (UI) will be contacted by D Smith to arrange exit interviews of Seniors 1-2 week before finals.

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Learning Outcome(s) Edit	Assessment Tools and Procedures Edit	Benchmarks Edit	Findings Edit	Curricular and Co-Curricular Changes to be Made Edit
<p>Communicate in writing, speech, and presentation in order to convey meaning, significance, emotion and values in and beyond peer groups. Edit</p> <p>Aligns with University Learning Outcome(s): Communicate</p>	<p>Direct Measure 1. Oral presentations from FS 303: Five minute presentations on a fictitious product and current processing technology 2. FS 418 Oral Seminar: Twenty minute seminars on specific food science topics related to chemistry, microbiology, processing or engineering. 3. Presentations were video taped and scored using a rubric.</p> <p>Indirect Measure None</p> <p>Face-to-Face Measures None</p>	<p>Direct Benchmarks 100% Meet Accept level criteria and 75% Meet Outstanding level criteria according to rubric</p> <p>Indirect Benchmarks</p>	<p>Direct Findings FS 303: students need instruction or modeling of professional presentations. Students either performed very well or very poorly, with little "average" performance. Most weak performances appeared to be due to lack of preparation or understanding conventions of public presentations. FS 418 Food Science Seminar: students generally demonstrated adequate presentation skills. There was improvement in fundamentals over FS 303 presentation particularly in the second long presentations. Less than exceptional presentations generally lacked smooth delivery and depth of research in subject.</p> <p>Indirect Findings None</p> <p>Face-to-Face Findings None</p>	<p>Assign students in FS 303 to attend a presentation by faculty member in the SFS or other department and comment on presentation. Provide opportunities for short presentation in FS 110 and FS 220 It is recommended that students pair up and critique one another outside of class. The instructor should provide an evaluation sheet used to grade the students. This should be turned into the instructor with comments by both the evaluator and the speaker on how to improve performance. Students need more instruction and practice on researching scientific databases and journal articles. Actions: FS 303 Continue to monitor course. FS 418 instructor will work to improve peer critiquing It is strongly advised that instructional library sessions in FS 110 and/or FS 220 are scheduled and scientific literature search assignments are practiced.</p>

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Learning Outcome(s) [Edit](#)

[Edit](#)

Aligns with University Learning Outcome(s):
Learn and Integrate

Assessment Tools and Procedures [Edit](#)

Direct Measure

Indirect Measure

- The process of merging the WSU and UI programs revealed systematic issues in the resulting curriculum requirements, varying food science course prerequisites, differences in general education requirements, and inaccurate or outmoded syllabi.
- Additionally faculty from another program were added to the faculty, and both universities modified baccalaureate learning goals, and general education requirements.
- Finally, several of the departments supplying supporting courses dropped or modified course thus requiring reevaluation of the food science curricula for both the WSU and UI branches of the School of Food Science program.
- Due to these factors it was decided to reset the assessment program for the SFS.

Face-to-Face Measures

Benchmarks [Edit](#)

Direct Benchmarks

Indirect Benchmarks

Findings [Edit](#)

Direct Findings

Starting in the Spring of 2011 a series of actions were taken.

- As part of the WSU assessment program, the teaching faculty were polled to develop program learning objectives based on the WSU and UI University wide learning goals, along with the IFT competencies.
- The curriculum at the course level was mapped to the WSU, UI, and IFT outcomes or competencies.
- Two topics of assessment were selected by the assessment coordinator in consultation with the faculty.
- The topics mapped onto existing course exam questions and assignments.
- Two data collection points in the curriculum for each assessment topic were selected to assess the progress of individual students or student cadre in the program.
- Rubrics were developed with the assistance of the ATL office at WSU and evaluated by the instructors of the courses involved.

Indirect Findings

- A systematic review of the food science curriculum was held in May 2012. Required food science course prerequisites, learning objectives, content, assignments, and teaching and learning issues were analyzed. Only half of the teaching faculty were able to attend the meeting and three courses were not discussed due to a lack of time.
- Changes to pre-requisites were decided upon.
- A computer course still needs to be developed or located to provide student instruction in spreadsheet applications.

Face-to-Face Findings

Curricular and Co-Curricular Changes to be Made [Edit](#)

- A second comprehensive review of the curriculum needs to be performed to evaluate the changes performed. The review needs to adequately analyze the roles of FS 432 Food Engineering, FS 303 Food Processing, FS 220 Food Quality and Safety, and FS 110 Introduction to Food Science in the SFS program as these were not sufficiently discussed in May 2012.
- Comments from the specific course surveys (FS 303, FS 462 and FS 470) need to be evaluated and incorporated into the courses.
- Additionally the learning objectives and content of FS 110 and F 220 need to be discussed and agreed upon by the faculty. These first food science courses offer significant opportunities for the development of communication and soft skills frequently cited as deficiencies in the SFS program.
- Finance/economics and marketing course options need to be identified at both universities and added to the required curriculum per alumni and employer feedback.
- Improved advising and senior exit surveys or tools need to be performed. The data collected from the current methods is unusable.
- A new assessment coordinator needs to be evaluated and more closely tied to the undergraduate curriculum committee.

[Skip to top of page](#)