

Cover Sheet for Assessment Plans

Directions: Please complete a separate cover sheet for each degree program (e.g., Associates – Doctorate). Feel free to make copies of this sheet if needed. Those graduate programs with an integrated master's and doctoral program may submit one cover sheet. The department head and respective dean are to sign before the plans are submitted to the Provost.

Department / Unit: Food Science Graduate Program

Title and Level of Academic Program (e.g., Chemistry, Ph.D.): Food Science, Ph.D.

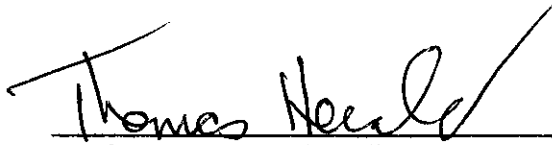
When submitting an Assessment Plan, please check and indicate when the faculty endorsed the plan.



The Food Science Graduate Program Coordinating Committee has met, reviewed, and endorsed the Assessment Plans being submitted for this degree program.

Date of Endorsement:

10/1/2004



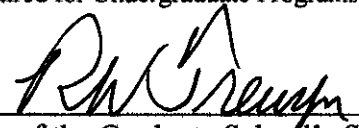
Graduate Program Coordinator

11/1/2004

Date

College Dean's Signature
(Required for Undergraduate Programs)

Date



Dean of the Graduate School's Signature
(Required for Graduate Degree Programs)

6/24/05
Date

November 1, 2004: Assessment plans are to be sent to the respective Dean
November 29, 2004: Relevant materials are to be sent from the Deans to the Provost

Department: Food Science Program
Degree Program Title: PhD Food Science

Evaluative Rubric for Degree Program Assessment Plans

Action Decided by the College Assessment Review Committee (CARC):

Date of Decision: June, 2005

Decision (check one):

- Revision Needed (*see first feedback section below*)
- Assessment Plan Approved

Feedback on immediate actions that are needed before approval:

Recommendations and feedback for the future (e.g., reporting assessment activities and results):

From the primary reviewer on the graduate CARC:

First, for both degree programs under SLO #2, in the second to the last sentence of the assessment the word "student" should be "students".

Under SLO #4 -- Ethical awareness -- I am still not convinced that simply having students participate in seminars and discussions allows the department to assess progress/regress over time with respect to this SLO. If the question were posed: "How will you use these data allow you to evaluate positive, negative or no change in student awareness/understanding of scientific ethics?", I think the candid answer would have to be: "We cannot."

In general I think they are much-improved.

**Revised Template
Degree Program
Assessment of Student Learning Plan
Kansas State University**

- Check the box if your program's student learning outcomes have been modified since November 2003. If so, please email (apr@ksu.edu) or attach a hard copy to this document.

A. College, Department, and Date

College: Graduate School
Department: *[Food Science Institute: Interdisciplinary Program]*
Date: *[October, 11, 2004] Revised April 20, 2005*

B. Contact Person(s) for the Assessment Plans

[Thomas J Herald, Food Science Graduate Program Coordinator]

C. Degree Program

Ph.D. Food Science

D. Assessment of Student Learning Three-Year Plan

1. Student Learning Outcome(s)

1. Advanced knowledge and understanding in area of emphasis offered by the Food Science Graduate Program
2. Competency in the collection, analyses and interpretation of data as it relates to the scholarship of their area of emphasis
3. . An ability to apply critical scientific thought in the application of hypothesis formation, and the design and execution of experiments.
4. An appreciation of ethical practice in data collection, analyses, and reporting, and an awareness of multiple responsibilities and impact of their professional conduct as it affects constituent groups.
5. . Competency in oral communication and scholarly writing in the form of a doctoral dissertation.
6. An ability to recognize and appreciate the multifaceted and dynamic interplay between science and society in a diverse world

Special rationale for selecting these learning outcomes (optional):

[If applicable, provide a brief rationale for the learning outcomes that were selected]

Relationship to K-State Student Learning Outcomes (insert the program SLOs and check all that apply):

Program SLOs	University-wide SLOs (<u>Graduate Programs</u>)			Program SLO is conceptually different from university SLOs
	Knowledge	Skills	Attitudes and Professional Conduct	
1. Advanced knowledge and understanding in area of emphasis offered by the Food Science Graduate Program	X			
2. Competency in the collection, analyses and interpretation of data as it relates to the scholarship of their area of emphasis	X	X		
3. An ability to apply critical scientific thought in the application of hypothesis formation, and the design and execution of experiments.	X	X		
4. An appreciation of ethical practice in data collection, analyses, and reporting, and an awareness of multiple responsibilities and impact of their professional conduct as it affects constituent groups			X	
5. Competency in oral communication and scholarly writing in the form of a doctoral dissertation	X	X		
6. An ability to recognize and appreciate the multifaceted and dynamic interplay between science and society in a diverse world			X	

2. How will the learning outcomes be assessed? What groups will be included in the assessment?

SLO 1

Advanced knowledge and understanding in area of emphasis offered by the Food Science Graduate Program will be assessed by completion of the appropriate course work as outlined in the Program of Study (POS) as prepared in consultation with a Graduate Advisory Committee (GAC). Additional outcomes tracked will be dissertation development and passing the final defense (as determined by the GAC). The Graduate Program Coordinator (GPC) will track additional information including the time from admission to completion, retention and graduation rate and placement at completion.

SLO 2

All students are required to convene a GAC. The GAC will meet during the first 9 months at which time the student will present their research hypothesis, preliminary literature review and some preliminary data. The GAC will thoroughly discuss the thesis topic and provide direction to the student. The GAC will complete and submit a progress report to the GPC. The GAC may convene multiple times throughout the student's program. Approximately 75% of the graduate students will participate in oral and poster presentations at professional meetings. The process includes collection, analyses and data interpretation.

The student's participation in professional meetings will be directly tracked using a semester report. Additionally, abstracts of the presentations are documented by each professional organization. The GAC provides final judgment over the student's research performance as verified with the signing of a "pass" on the final defense ballot. It is anticipated that at least 60% of the student will have at least one peer-reviewed manuscript developed from the dissertation that will reflect the student's competency in scholarship. The GPC in consultation with the major professor will track the publications

SLO 3

All graduate students are required to enroll and pass with a grade of a "B" or better two Food Science Graduate Seminars. The Graduate Seminar is designed to assist students with their oral, written and presentation skills. Prior to degree completion all students are required to deliver a final oral presentation of the dissertation at an open forum that is announced to all FSI participating colleges and departments through a weekly electronic newsletter. The written dissertation and defense of the dissertation will be evaluated by discussion and vote by the GAC. The results of the ballot will be forwarded on to the KSU Graduate School. At the time of the final defense the GAC will complete a "thesis quality" evaluation that is submitted to the GPC.

SLO 4.

The GPC will address ethical practices at the annual graduate student meeting held during the fall semester. Students will attend periodic seminars on ethical practices in science and research as offered by the department, college or university. On campus seminars will be announced through a weekly electronic newsletter. The major professor will encourage the students to document their participation and attendance in these events.

SLO 5

The written dissertation and defense of the dissertation will be evaluated by discussion and vote by the GAC. The results of the ballot will be forwarded on to the KSU Graduate School. At the time of the final defense the GAC will complete a "thesis quality" evaluation that is submitted to the GPC. After the completion of each semester a activities report will be submitted to the GPC that documents the student's presentation at a professional meeting. Abstracts of the presentations are documented by each professional organization

SLO 6.

The number of international graduate students is over 40%. Generally, there are over 10 different countries represented at any one time in the FSI Graduate Program. The mere ethnic diversity of the program allows for a unique bonding of the graduate students. All graduate students will be strongly encourage to attend any workshop that emphasizes diversity training, ethnic or racial background in the form of invited lecturers and seminars. These on-campus seminars will be announced through a weekly electronic newsletter. The semester report will monitor participation and attendance.

3. When will these outcomes be assessed? When and in what format will the results of the assessment be discussed?

The Food Science Graduate Program will create a data base to track the success rate of the students, thesis quality, plans after graduation, and if manuscript were submitted prior to leaving KSU. The results of the form will be shared twice a year at the Food Science Graduate Faculty Committee meetings.

4. What is the unit's process for using assessment results to improve student learning?

The Food Science Graduate Program is an interdisciplinary. The program includes approximately forty faculty members that span eleven departments and five colleges. The Food Science Graduate Program elects nine members to the Food Science Graduate Committee. The Committee convenes every month to discuss relevant issues. The issues ranges from evaluating course offerings ranging include data analysis,

Last revised 9/9/04

content-based course and communication skills. The changes made to the Food Science Graduate Program are either voted on or shared at bi-annual meetings with the entire Interdisciplinary program. Additionally, every three years (starting 2006) a one half- day retreat will be convened to thoroughly evaluate the program.

PHD Learning Outcomes	Degree Timeline		
	• Early degree program • (first year)	• Mid degree program • (second year)	• Late degree program • (third year)
1. Advanced knowledge and understanding in an area of emphasis offered by the Food Science Graduate Faculty.	<ul style="list-style-type: none"> • The student in consultation with the Major Professor and Advisory Committee will develop Program of Study. • The student will complete required course work with a minimum of a "B" grade. • The students' will engaged in laboratory research associated with the expertise of the students' Major Professor. • Semester Report will monitor academic progress. 	<ul style="list-style-type: none"> • The student will continue progress on courses listed on the Program of Study. • The students' will engaged in laboratory research associated with the expertise of the students' Major Professor. • Semester Report will monitor academic progress. 	<ul style="list-style-type: none"> • The students' will complete all the courses on Program of Study with a minimum of a "B" grade. • The students' will engaged in laboratory research associated with the expertise of the students' Major Professor.
2. Competency in the collection, analyses and interpretation of data as it relates to the scholarship of their area of emphasis.	<ul style="list-style-type: none"> • FDSCI 899 • STAT course(s) identified on Program of Study • The students may participate on other research projects associated with their professor's lab • Student will engage in frequent discussions with major professor and advisory committee to determine quality and productivity of report/thesis research. The major professor will document the progress in the Semester Report. 	<ul style="list-style-type: none"> • FDSCI 899 • STAT course(s) identified in the Program of Study • Submission of literature review. • Frequent discussion of progress and research with major professor. • Participate on other research projects associated with the professors lab • Meet with statistician to approve experimental design of research. • Student will meet frequently with the major professor and advisory committee to discuss report/thesis research. The major professor will document the progress in the • Semester Report. 	<ul style="list-style-type: none"> • FDSCI 899 • Approximately 75% of the graduate students will present an oral or poster presentations at scientific meeting • Approximately 60% of the graduate students will submit a manuscript to a peer-reviewed journal. This will be monitored in the semester report. Approximately 85% of the students will have completed a thesis with product (report, software, or manuscript) • Semester Report document that the student prepared and presented data at a professional meeting. Abstracts of the presentations are documented by each professional organization. • Graduate Committee will sign a ballot indicating the passing

			of the final oral presentation of thesis or report
3. Competency in oral communication and scholarly writing in the form of a master's thesis or report.	<ul style="list-style-type: none"> • The Program Coordinator will address the importance of communication skills at a mandatory annual graduate student meeting. The Program Coordinator may invite a guest lecturer to address the subject. • All students will be required to attend a minimum of one defense to observe presentation techniques. Attendance will be taken. • Approximately 20% of the graduate students will give some portion of a lecture as a requirement for assisting in Food Science related courses • Semester Report will progress in meeting the above requirements. 	<ul style="list-style-type: none"> • The Program Coordinator will address the importance of communication skills at a mandatory annual graduate student meeting. The Program Coordinator may invite a guest lecturer to address the subject. • The students are required to earn a minimum of a "B" in seminar, FDSCI 850 • Approximately 25% of the graduate students will present an oral or poster at scientific meeting • Approximately 60% of the graduate students will give some portion of a lecture as a requirement for assisting in Food Science related courses • A summary of presentations and will be presented at the bi-annual Food Science Institute meeting • Semester Report will monitor participation and attendance 	<ul style="list-style-type: none"> • The Program Coordinator will address the importance of communication skills at a mandatory annual graduate student meeting. The Program Coordinator may invite a guest lecturer to address the subject. • Approximately 75% of the graduate students will deliver an oral or poster presentations at professional meeting • Approximately 85% of the students will complete a thesis or report. The quality of the thesis or report will be assessed by the Graduate Committee. • Approximately 60% of the thesis students will submit and manuscript to a peer reviewed journal prior to graduation. • Semester Report document that the student prepared and presented data at a professional meeting. Abstracts of the presentations are documented by each professional organization.
4. An appreciation of ethical practice in data collection, analyses, and reporting, and an awareness of multiple responsibilities and impact of their professional conduct as it affects constituent groups.	<ul style="list-style-type: none"> • The Program Coordinator will address ethical practices at the annual graduate student meeting. The Program Coordinator may invite guest speakers to address this issue. • The Major Professor will actively mentor the student on ethical practices 	<ul style="list-style-type: none"> • The Program Coordinator will address ethical practices at the annual graduate student meeting. The Program Coordinator may invite guest speakers to address this issue • The Major Professor will actively mentor the student on ethical practices 	<ul style="list-style-type: none"> • The Program Coordinator will address ethical practices at the annual graduate student meeting. The Program Coordinator may invite guest speakers to address this issue • The Major Professor will actively mentor the student on ethical practices

	<ul style="list-style-type: none"> • Students will attend periodic seminars on ethical practices in science and research as offered by the department, college or university. • Semester Report will monitor participation and attendance. A summary of seminar participation will be presented at the bi-annual Food Science Institute meeting 	<ul style="list-style-type: none"> • Students will attend periodic seminars on ethical practices in science and research as offered by the department, college or university. Semester Report will monitor participation and attendance. A summary of seminar participation will be presented at the bi-annual Food Science Institute meeting 	<ul style="list-style-type: none"> • Students will attend periodic seminars on ethical practices in science and research as offered by the department, college or university. • Semester Report will monitor participation and attendance. A summary of seminar participation will be presented at the bi-annual Food Science Institute meeting
5. Competency in oral communication and scholarly writing in the form of a doctoral dissertation.	<ul style="list-style-type: none"> • FDSCI 850 • Approximately 25% of the graduate students will attend at least one final defense to observe presentation techniques. • Approximately 40% of the graduate students will assistant in FDSCI undergraduate course • Participation will be documented in the semester report that is submitted to the Program Coordinator s 	<ul style="list-style-type: none"> • FDSCI 850 • Approximately 60% of the graduate students will deliver an oral or poster presentations at scientific meeting • Approximately 75% of the graduate students will assistant in FDSCI undergraduate courses. • Participation will be documented in the semester report that is submitted to the Program Coordinator 	<ul style="list-style-type: none"> • FDSCI 999 • Approximately 80% of the graduate students will assistant in FDSCI undergraduate course • Approximately 90 % of students have oral or poster presentations at scientific meeting • At least 75 % complete of the candidates will complete their dissertation with manuscript(s) report as assessed by submitting the final ballot to the graduate school. • Semester Report document that the student prepared and presented data at a professional meeting. abstracts of the presentations are documented by each professional organization. •
6. An ability to recognize and appreciate the multifaceted and dynamic interplay between science and society in a diverse world.	<ul style="list-style-type: none"> • Approximately 25% of the graduate students will attend at least one workshop that emphasizes diversity training, ethnic or racial background in the form of invited lectures and seminars that are offered by the department, college or university • Participation will be 	<ul style="list-style-type: none"> • Approximately 50% of the graduate students will attend at least one workshop that emphasizes diversity training, ethnic or racial background in the form of invited lectures and seminars that are offered by the department, college or university. • Participation will be 	<ul style="list-style-type: none"> • Approximately 75% of the graduate students will attend at least one workshop that emphasizes diversity training, ethnic or racial background in the form of invited lectures and seminars that are offered by the department, college or university • Participation will be

	documented in the semester report that is submitted to the Program Coordinator	documented in the semester report that is submitted to the Program Coordinator	documented in the semester report that is submitted to the Program Coordinator
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