COVER SHEET FOR REVISED STUDENT LEARNING OUTCOMES

Directions: For each program (e.g., degree, certificate, minor, secondary major, etc.) and level (undergraduate and graduate), please complete separate cover sheets. Feel free to make copies of this sheet if needed. Those graduate programs with an integrated master's and doctoral program may provide one set of cover sheets.

Department/Unit: Grain Science and Industry
Title of Academic Program: PhD Grain Science

Faculty contact(s) for the list of student learning outcomes for this academic program:

Dr. Virgil W. Smail, Professor/Head _____

_____ _____

_____ _____

Type of Degree (check one):

- ☐ Bachelor's ☐ Master's ☑ PhD ☐ Ed.D.
- ☐ U. Certificate ☐ Minor ☐ Secondary major ☐ Associate
- ☐ G. Certificate
- ☐ Joint Degree (list the degree types):_____
- ☐ Other:_____

List of Student Learning Outcomes for this Degree Program

Please provide an attached list of learning outcomes or copy and insert them below.

STUDENT LEARNING OUTCOMES AND ASSESSMENT FOR GRADUATE EDUCATION
DEPARTMENT OF GRAIN SCIENCE AND INDUSTRY
REVISED AUGUST 23, 2005

Graduates from the Kansas State University Grain Science and Industry Ph.D. degree program will have demonstrated:

Section 1: Knowledge

Outcomes

- Depth of knowledge or understanding in one or more specialty areas of Grain Science and Industry.

- Ability to integrate the breadth of scientific knowledge in a specialty area of grain structure, properties, processing, storage, handling, and marketing.

Assessments
- Successful completion of the course program of study.
- Review of the scientific literature for a particular subject as part of the PhD thesis.

Section 2: Critical Thinking

Outcomes
- Ability to apply critical thinking skills within the context of the Grain Science Industry profession.
- Ability to apply knowledge and skills of their profession to the design, analysis, and interpretation of research experiments.
- Ability to apply the results of research to practical problems.

Assessments
- Interaction with major professor and advising committee.
- Successful completion of research experiments.
- Successful preparation and defense of the PhD thesis.
- Successful completion of approved course work.

Section 3: Communication

Outcomes
- Proficiency in written, verbal, and listening communication.
- Ability to use different forms of communication to transfer knowledge to a variety of clientele, colleagues, and members of the scientific community.

Assessments
- Interaction with major professor and advising committee.
- Defense of research project and completion of seminar requirements.
- Participation in graduate seminar each semester.
- Participation in professional meetings, graduate student organizations, and industry association meetings.
- Performance in internship, if undertaken.

Section 4: Diversity

Outcomes
- Ability to consider the diverse needs of grain producers and urban stakeholders when conducting research and making research/production recommendations.
- Ability to use different forms of communication to transfer knowledge to a variety of clientele, colleagues, and members of the community.
- Ability to function in culturally diverse, multi-disciplinary teams.

Assessments

- Student participation in international meetings (number attending, number of posters, and oral presentations).
- Participation in graduate student organizations.
- Attendance at departmental lectures that address the role of Grain Science and Industry in world food production.
- Maintain a culturally diverse graduate student body.
- Participate in graduate seminars with students from other cultures.

Section 5: Ownership of Learning

Outcomes

- Ability to acquire knowledge and apply it to a chosen profession.
- Desire and ability to pursue life-long learning.

Assessments

- Participation in professional and scientific meetings; demonstrate complete review of literature for completion of PhD thesis.
- Participation in continuing education or professional certification; successful employment in the grain industry; participation in professional leadership positions.

Section 6: Personal and Professional Development

Outcomes

- Ability to make professional contributions to the science and practice of grain science and processing within the ethical framework of the profession.

Assessments

- Completion and defense of PhD thesis; publication of technical papers, extension bulletins, or research manuscripts.
- Membership and participation in student programs and professional societies; graduate teaching experience and evaluation; student honors and awards.
- Completion of required courses.

Please check the description(s) that best reflect the information being submitted.

☑ Faculty for this degree program have met, reviewed, And endorsed the list of student learning outcomes being submitted.	Date of Endorsement: August 23, 2005

Virgil W. Smith

Department Head's Signature

August 23, 2005

Date

Don Boggs

Dean's Signature

9-6-05

Date

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

9/7/05

Date