Overview

The HNFAS department has three MS awarding graduate programs, in Nutritional Sciences (NS), Food Science (FS), and Animal Sciences (AS). Assessment information on these three programs will be provided herein.

Application data were examined from 2001-2004. We received an average of 146 inquiries per year, with 79 for Nutritional Sciences, 42 for Food Science and 26 for Animal Sciences. During this period, we received an average of 35 applications per year (24% of the number of inquiries), 16 for NS, and 10 for each of AS and FS. Of those applications, an average of 11 (31% acceptance rate) were admitted & enrolled each year, 5 in each of NS and AS and 1 in FS.

Among admitted students the average GPA was 3.27, with 3.35 in NS, 3.23 in FS and 3.22 in AS. Average GRE’s were 486 Verbal, 609 Quantitative, and 567 Analytical. For NS these averages were GPA-3.35, GRE- 500V, 619Q, 536A; for FS GPA-3.23, GRE-486V, 621Q, 610A; and for AS GPA- 3.22, GRE-462V, 587Q, and 553A.

We have begun a process of integration across the three programs. We have also begun to survey our graduates as another assessment mechanism, though we have not yet analyzed these data. Please find the survey instrument at the back of this document.

Graduate Program in Nutritional Sciences (Michael Dunn, Graduate Chair)

1. Learning Outcomes. The learning objectives of the program are that students demonstrate mastery of fundamental knowledge in nutrition as well as advanced scholarship in their specialty area. In addition, students will be able to communicate both orally and in writing at a high level of proficiency, conduct and interpret nutrition research, and function as a professional in the discipline of nutrition.

2. Publication of Learning Outcomes. The above learning objectives are published in the program summary sent to all prospective students, on the program’s departmental website, and in the programs Guide For Graduate Students given to all prospective and admitted students.

3. Mapping Learning Outcomes into the Program.

Fundamental knowledge in nutrition is mapped into the program buy requiring prerequisite courses in basic nutrition and related disciplines in the students undergraduate preparation, or that these prerequisite courses be taken early in the student’s MS program. An oral candidacy exam conducted by graduate faculty with expertise spanning all areas of nutrition is administered half way through the student’s program and any deficiencies in fundamental knowledge uncovered in
the exam are required to be remedied by additional coursework or other appropriate approaches like independent studies, teaching assistant duties, faculty mentoring, and internships.

Advanced scholarship is mapped into the program by requiring 18 credits of graduate level coursework, at least 12 of which must be at the 600 level or higher with at least 7 credits being advanced nutrition courses. Scholarship in the student’s specialty area is mapped in by the chair of the student’s research committee who guides the student in the selection of elective courses to shape that specialty area, as well as by mentoring the student in that area during the research and thesis writing processes.

Oral communication skills are mapped in by requiring the students to take at least two nutrition seminar classes where they present a critical evaluation of a nutrition topic, by the oral candidacy exam, by requiring all students to act as a teaching assistant during at least one semester of their program, and by requiring an oral presentation of their research at their final exam. Written communication is mapped in by writing assignments and essay type exams in courses, a written proposal for the student’s research, and by a written thesis or Plan B research report required for the final exam.

Conducting nutrition research is mapped in by the requirement of a thesis or Plan B research project conducted under the guidance of a research mentor (Chair of the thesis or Plan B project) and a research committee. Interpretation of research is mapped in by seminar courses requiring the oral presentation of a research paper or proposal, by proposal writing, by journal clubs, by the written literature review required in a thesis or Plan B report, and by the literature review presented orally at the final exam.

The ability to function as a professional in the field is mapped in by the requirement of an oral candidacy exam of basic nutrition knowledge, the requirement of at least one semester as a teaching assistant, and the production of a research-based thesis or Plan B report of publication quality which is defended during a final exam.

4. **Population covered.** The population covered by this assessment is classified MS students in the Nutritional Sciences Graduate Program.

5. **Assessment events:**

   a) **Oral Candidacy Exam** (given after one year in the program). Prior to the exam, the student’s advisor and examination committee review the student’s academic progress. The purpose is to insure that the student has taken, or has plans to take, required courses as well as any deficient prerequisites. In addition, timely progress on the student’s proposed research is also evaluated. The candidacy exam itself is used to evaluate if the student has a mastery of fundamental knowledge in nutrition and related fields, and can express this knowledge orally in a professional manner. If deficiencies in fundamental knowledge or communication skills are uncovered, the examination committee recommends coursework, independent study, mentorship by a faculty member, seminar presentations, or other appropriate means to remedy the deficiency.

   b) **Required Seminar Presentations.** At least two seminar presentations focusing on research literature are required in the student’s program. These presentations are used to evaluate the student’s ability to interpret research literature and present literature reviews in a professional format (e.g. Powerpoint) using appropriate oral communication skills. The presentations are used by the seminar instructor and the student’s advisor to evaluate the student’s proficiency and any needs for further development.
c) **Required Teaching Assistant Experience.** All students are required to assist a faculty member with instructional-related work for at least one semester during their MS program. The faculty member and the student agree on a set of instructional-related duties prior to the start of the semester. At the end of the semester, the instructor evaluates the student’s performance in writing with a copy forwarded to the graduate chair. If the evaluation is unfavorable, the experience must be repeated until a favorable evaluation is achieved. This teaching experience is used to evaluate the student’s ability to work in a professional educational context.

d) **Thesis defense/final exam.** This culminating experience evaluates the student’s ability to conduct research at the MS level, write a research report in publication format, and orally present research findings in a professional manner. The final exam committee evaluates these abilities by reading the written report, listening to the oral presentation, and conducting an oral exam covering all aspects of the written report and presentation. If any aspect of the final exam is unsatisfactory, the student is asked to remedy the situation. This may involve rewriting the report, conducting more research, preparing a new presentation, or deepening their understanding of the research in order to demonstrate that they can function at the professional level as a researcher in the field.

6. **Contributions to discipline.**

   a) **Publications.** Most graduate students (over 90%) contribute to the discipline by publishing a Plan A Master’s thesis. About 50% of MS theses are further published in peer-reviewed professional journals.

   b) **Presentations at professional conferences.** Most students (over 75%) present their MS research at some type of professional-level conference. These conferences include the CTAHR symposium, an in-house professional-style conference sponsored by our college (CTAHR), as well as national and international research conferences sponsored by professional research organizations in the field such as the American Society for Nutritional Sciences.

7. **Monitoring student post-graduate professional activities.**

   We conduct a survey of graduates (see attached). These data are considered in program development and modification.

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**Graduate Program in Food Science (Wayne Iwaoka, Graduate Chair)**

1. **Learning Outcomes.** The learning objectives of the program are that students demonstrate mastery of fundamental knowledge in food science as well as advanced scholarship in their specialty area. In addition, students will be able to communicate both orally and in writing at a high level of proficiency, conduct and interpret food science research, and function as a professional in the discipline of food science.

2. **Publication of Learning Outcomes.** The above learning objectives are published in the program summary sent to all prospective students, on the program’s departmental website, and in the programs Guide for Graduate Students given to all prospective and admitted students.

3. **Mapping Learning Outcomes into the Program.** Fundamental knowledge in food science is mapped into the program by requiring prerequisite courses in basic food science and related
disciplines in the students undergraduate preparation, or that these prerequisite courses be taken early in the student’s MS program. An oral candidacy exam will be conducted by graduate faculty with expertise spanning all areas of food science is administered half way through the student’s program and any deficiencies in fundamental knowledge uncovered in the exam are required to be remedied by additional coursework or other appropriate approaches like independent studies, teaching assistant duties, faculty mentoring, and internships.

Advanced scholarship is mapped into the program by requiring 18 credits of graduate level coursework, at least 12 of which must be at the 600 level or higher with at least 7 credits being advanced food science courses. Scholarship in the student’s specialty area is mapped in by the chair of the student’s research committee who guides the student in the selection of elective courses to shape that specialty area, as well as by mentoring the student in that area during the research and thesis writing processes.

Oral communication skills are mapped in by requiring the students to take at least two multidisciplinary seminar classes (composed of food science, nutritional sciences, and animal sciences) where they present a critical evaluation of a food science topic, by the oral candidacy exam, by requiring all students to act as a teaching assistant during at least one semester of their program, and by requiring an oral presentation of their research at their final exam. Written communication is mapped in by writing assignments and essay type exams in courses, a written proposal for the student’s research, and by a written thesis or Plan B research report required for the final exam.

Conducting food science research is mapped in by the requirement of a thesis or Plan B research project conducted under the guidance of a research mentor (Chair of the thesis or Plan B project) and a research committee. Interpretation of research is mapped in by seminar courses requiring the oral presentation of a research paper or proposal, by proposal writing, by journal clubs, by the written literature review required in a thesis or Plan B report, and by the literature review presented orally at the final exam.

The ability to function as a professional in the field is mapped in by the requirement of an oral candidacy exam of basic food science knowledge, the requirement of at least one semester as a teaching assistant, and the production of a research-based thesis or Plan B report of publication quality which is defended during a final exam.

4. Population covered. The population covered by this assessment is classified MS students in the Food Science Graduate Program.

5. Assessment events:

a) Oral Candidacy Exam (given after one year in the program). Prior to the exam, the student’s advisor and the examination committee review the student’s academic progress. The purpose is to insure that the student has taken, or has plans to take, the proper required courses as well as any deficient prerequisites. In addition, timely progress on the student’s proposed research is also evaluated. The candidacy exam itself is used to evaluate if the student has a mastery of fundamental knowledge in food science and related fields, and can express this knowledge orally in a professional manner. If any deficiencies in fundamental knowledge or communication skills are uncovered, then the examination committee recommends coursework, independent study, mentorship by a faculty member, seminar presentations, or other appropriate means to remedy the deficiency.
b) **Required Seminar Presentations.** At least two seminar presentations focusing on research literature are required in the student’s program. These presentations are used to evaluate the student’s ability to interpret research literature and present literature reviews in a professional format (eg. Powerpoint) using appropriate oral communication skills. The presentations are used by the seminar instructor and the student’s advisor to evaluate the student’s proficiency and any needs for further development.

c) **Required Teaching Assistant Experience.** All students are required to assist a faculty member with instructional-related work for at least one semester during their MS program. The faculty member and the student agree on a set of instructional-related duties prior to the start of the semester. At the end of the semester, the instructor evaluates the student’s performance in writing with a copy forwarded to the graduate chair. If the evaluation is unfavorable, the experience must be repeated until a favorable evaluation is achieved. This teaching experience is used to evaluate the student’s ability to work in a professional educational context.

d) **Thesis defense/final exam.** This culminating experience evaluates the student’s ability to conduct research at the MS level, write a research report in publication format, and orally present research findings in a professional manner. The final exam committee evaluates these abilities by reading the written report, listening to the oral presentation, and conducting an oral exam covering all aspects of the written report and presentation. If any aspect of the final exam is unsatisfactory, the student is asked to remedy the situation. This may involve rewriting the report, conducting more research, preparing a new presentation, or deepening their understanding of the research in order to demonstrate that they can function at the professional level as a researcher in the field.

6. **Contributions to discipline.**

a) **Publications.** Most graduate students (over 90%) contribute to the discipline by publishing a Plan A Master’s thesis. About 50% of MS theses are further published in peer-reviewed professional journals.

b) **Presentations at professional conferences.** Most students (over 75%) present their MS research at some type of professional-level conference or symposia. These presentations include the CTAHR symposium, an in-house professional-style conference sponsored by our college (CTAHR), as well as national and international research conferences sponsored by professional research organizations in the field such as the Institute of Food Technologists.

7. **Monitoring student post-graduate professional activities.**
We conduct a survey of graduates (see attached). These data are considered in program development and modification.

**Graduate Program in Animal Sciences (Yong Soo Kim, Graduate Chair)**

1. **Learning Outcomes.** The learning objectives of the program are that students demonstrate mastery of fundamental knowledge in disciplinary area of animal sciences as well as advanced scholarship in their specialty area. In addition, students will be able to communicate both orally and in writing at a high level of proficiency, conduct and interpret research in animal sciences, and function as a professional in the discipline of animal science.
2. **Publication of Learning Outcomes.** The above learning objectives are published in the program summary sent to all prospective students, on the program’s departmental website, and in the program's Guide for Graduate Students given to all prospective and admitted students.

3. **Mapping Learning Outcomes into the Program.** Fundamental knowledge in areas of animal sciences is mapped into the program by requiring prerequisite courses in animal science and related disciplines in the students' undergraduate preparation, or that these prerequisite courses be taken early in the student’s MS program. An oral candidacy exam conducted by graduate faculty with expertise spanning all areas of animal science is administered halfway through the student’s program and any deficiencies in fundamental knowledge uncovered in the exam are required to be remedied by additional coursework or other appropriate approaches like independent studies, teaching assistant duties, faculty mentoring, and internships.

Advanced scholarship is mapped into the program by requiring 18 credits of graduate level coursework, at least 12 of which must be at the 600 level or higher with at least 3 courses being from animal science graduate courses. Scholarship in the student’s specialty area is mapped in by the chair of the student’s research committee who guides the student in the selection of elective courses to shape that specialty area, as well as by mentoring the student in that area during the research and thesis writing processes.

Oral communication skills are mapped in by requiring the students to attend weekly seminars each semester and to take at least two seminar classes where they give oral presentation of animal science topic, by the oral candidacy exam, by requiring all students to act as a teaching assistant during at least one semester of their program, and by requiring an oral presentation of their research at their final exam. Written communication is mapped in by writing assignments and essay type exams in courses, a written proposal for the student’s research, and by a written thesis or Plan B research report required for the final exam.

Conducting animal science research is mapped in by the requirement of a thesis or Plan B research project conducted under the guidance of a research mentor (Chair of the thesis or Plan B project) and a research committee. Interpretation of research is mapped in by seminar courses requiring the oral presentation of a research paper or proposal, by proposal writing, by journal clubs, by the written literature review required in a thesis or Plan B report, and by the literature review presented orally at the final exam.

The ability to function as a professional in the field is mapped in by the requirement of an oral candidacy exam of basic animal science knowledge, the requirement of at least one semester as a teaching assistant, and the production of a research-based thesis or Plan B report of publication quality which is defended during a final exam.

4. **Population covered.** The population covered by this assessment is classified MS students in the Animal Sciences Graduate Program.

5. **Assessment events:**

a) **Oral Candidacy Exam** (given after one year in the program). Prior to the exam, the student’s advisor and the examination committee review the student’s academic progress. The purpose is to insure that the student has taken, or has plans to take, the proper required courses as well as any deficient prerequisites. In addition, timely progress on the student’s proposed research is also evaluated. The candidacy exam itself is used to evaluate if the student has a mastery of
fundamental knowledge in animal science and related fields, and can express this knowledge orally in a professional manner. If any deficiencies in fundamental knowledge or communication skills are uncovered, then the examination committee recommends coursework, independent study, mentorship by a faculty member, seminar presentations, or other appropriate means to remedy the deficiency.

b) **Required Seminar Presentations.** At least two seminar presentations focusing on research literature are required in the student’s program. These presentations are used to evaluate the student’s ability to interpret research literature and present literature reviews in a professional format (Powerpoint) using appropriate oral communication skills. The presentations are used by the seminar instructor and the student’s advisor to evaluate the student’s proficiency and any needs for further development.

c) **Required Teaching Assistant Experience.** All students are required to assist a faculty member with instructional-related work for at least one semester during their MS program. The faculty member and the student agree on a set of instructional-related duties prior to the start of the semester. At the end of the semester, the instructor evaluates the student’s performance in writing with a copy forwarded to the graduate chair. If the evaluation is unfavorable, the experience must be repeated until a favorable evaluation is achieved. This teaching experience is used to evaluate the student’s ability to work in a professional educational context.

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b) **Presentations at professional conferences.** Most students (over 75%) present their MS research at some type of professional-level conference. These conferences include the CTAHR symposium, an in-house professional-style conference sponsored by our college (CTAHR), as well as national and international research conferences sponsored by professional research organizations in the field such as the American Society for Animal Sciences.

7. **Monitoring student post-graduate professional activities.**

We conduct a survey of graduates (see attached). These data are considered in program development and modification.
Survey of 2000 – 2003 Master of Science Graduates in Animal Sciences (AS), Food Science (FS), or Human Nutrition (HN)

The Department of Human Nutrition, Food, and Animal Sciences is interested in your postgraduate activities since receiving your Master of Science degree. We would appreciate it if you complete the following survey and return it by August 31, 2005. Responses to the survey will be treated as confidential and will be reported in summary form only. Thank you very much for your cooperation and participation. If you would like to see a summary of the results, please let us know.

SECTION I  General Information
1. Name (under which you went to school): ________________________________
Address: __________________________________________________________________
Telephone: __________________________ E-Mail: __________________________

2. What was your major field of study?
   □ a. Animal Sciences □ b. Food Science □ c. Human Nutrition

3. When did you graduate?
   □ g. May 2002          □ h. August 2002          □ i. December 2002
   □ m. If we have the wrong date, when did you graduate? __________________________

SECTION II  Current Employment Status. Please fill out this section completely.

4. Check the box(es) that fit(s) your current status. Check all that apply.
   □ a. Employed full-time (30 or more hours/week)
   □ b. Employed part-time (less than 30 hours/week)
   □ c. In graduate school or post graduate studies full-time. If checked, where?
      __________________________________________________________________
   □ d. In graduate school or post graduate studies part-time. If checked, where?
      __________________________________________________________________
   □ e. Accepted and will begin schooling
   □ f. Not working and seeking employment
   □ h. Not working and not seeking employment

5. What was your status during the year following graduation?
a. Employed full-time (30 or more hours/week)

b. Employed part-time (less than 30 hours/week)

c. Continued in graduate school or post graduate studies full-time

d. Continued in graduate school or post graduate studies part-time

e. Did not work but sought employment

f. Did not work and did not seek employment

h. (Please list main reason, e.g. travel, family time, etc.:________________________)

SECTION III  Employment Details. Since graduating from UHM, if you have worked, currently are working or have accepted definite employment, complete this section.

6. Name of organization?

<table>
<thead>
<tr>
<th>Organization Name</th>
<th>Location(City &amp; State/Country)</th>
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</table>

8. Type of employer?

|---------------|------------|---------------|

| d. Not currently employed |

9. Which of the following best describes your employer?

<table>
<thead>
<tr>
<th>a. Nutrition Services (including dietetics)</th>
<th>b. Research</th>
<th>c. Consulting Service</th>
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|                                             |             | (primary service:___________)

| d. Health Services | e. Education | f. Professional school (medicine, pharmacy, veterinary medicine, etc) |

| g. Animal Clinic | h. Other |

10. Your job title?

11. Is this your first job after graduation?

| a. Yes | b. No. If no, how many jobs have you had?__________ |

12. How long have you worked in your current job?

<table>
<thead>
<tr>
<th>a. Less than a year</th>
<th>b. 1 year</th>
<th>c. 2 years</th>
<th>d. 3 years</th>
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| e. 4 years | f. 5 years | g. 6 years or more |

13. Please indicate the job search method(s) you used in your job search. Check all that apply.

| a. Applied directly to organization | f. Career Services (www.hawaii.edu/career) |
14. Of the job search methods you used, which did you find effective (i.e. led to interviews, job offers)?

- Referral by Professor/Advisor
- Newspaper/Web classifieds
- Referral by Family and Friend
- Government employment agency
- Networking on your own
- Private employment agency
- Previous employer
- Other (Specify: __________)

15. We would appreciate it if you shared with us your current gross annual salary range.

- Under $20,000
- $20,000-29,999
- $30,000-39,999
- $40,000-49,999
- $50,000-59,999
- Over $60,000
- Prefer not to answer

16. How relevant is this job to your career goals?

- Relevant
- Somewhat relevant
- Not relevant at all

17. How helpful has your degree/major been in the duties of your current job?

- Helpful
- Somewhat helpful
- Not helpful at all

18. How helpful were your CTAHR/HNFAS graduate student experiences in preparing you for your current job?

- Very helpful
- More than helpful
- Helpful
- Not very helpful
- Not helpful at all

19. Indicate your satisfaction with the HNFAS program in your major.

<table>
<thead>
<tr>
<th>Category</th>
<th>Very Satisfied</th>
<th>Dis-satisfied</th>
<th>Neutral</th>
<th>N/A</th>
<th>Very Satisfied</th>
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<tbody>
<tr>
<td>a. Variety of courses offered</td>
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<td>b. Class size related to the course type</td>
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<td>c. Course availability</td>
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<td>d. Multicultural content of the courses</td>
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<td>e. Variety of instructional approaches used</td>
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<td>f. Preparation for further academic studies</td>
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<td>g. Responsiveness of faculty to student input</td>
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<td>h. Faculty access outside of class</td>
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<td>i. Academic advising</td>
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<td>j. Overall quality of instruction</td>
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k. Quality of program in major/field

20. **NON-SPECIFIC COMMENTS:** What would you change in your graduate educational experience that will help HNFAS better prepare our future students?

21. If there were any courses, incidents, or individuals that made a difference for you or your career, we would appreciate if you shared this with us (Use back of sheet if necessary).