

Integration of Foundational and Interdisciplinary Knowledge in Nutrition and Metabolism Doctoral Program

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Background

- The Nutrition and Metabolism doctoral program has historically focused on developing specialized expertise in a student's thesis research.
- Diversities in academic background of students entering the program as well as a broad range of thesis topics has resulted in graduates from the same program without the same set of competencies.
- Our vision is that graduates of the program should be experts in the area of their research with broader knowledge of nutrition and an appreciation of the complexity of the discipline.

The objectives of our project were to:

- establish core competencies for the Nutrition and Metabolism doctoral program
- identify pathways that students could access to develop the core competencies
- develop a method for self-evaluation of core competency development.

Process

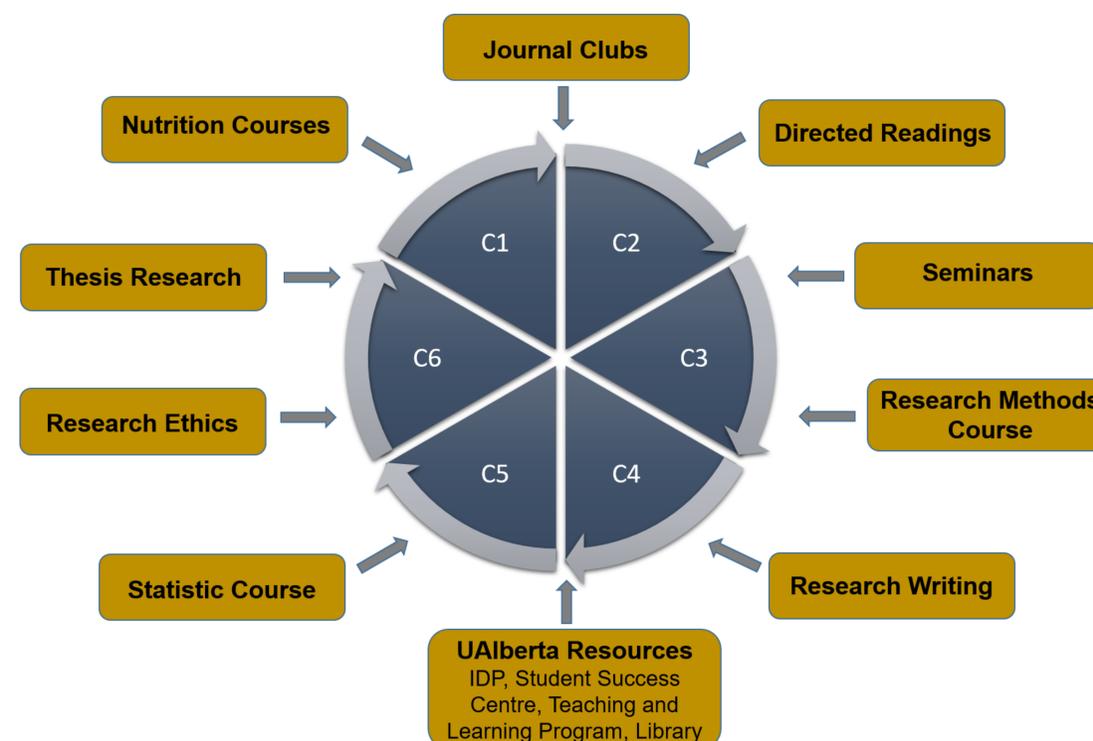
- Faculty in the Division of Nutrition identified core competencies and the specific components within each competency.
- An environmental scan was conducted to compare core competencies and pathways used to develop competencies in other doctoral nutrition programs in Canada and the United States.
- Literature searches of general competencies developed with doctoral programs and pathways used to develop competencies were also conducted.
- Formal and informal options to develop the core competencies were identified for each component of the six core competencies.
- A self-evaluation worksheet for level of competency development and a one page summary of the self-evaluation were designed.

Core Competencies and Development Pathways

Core Competencies for Doctoral Program in Nutrition and Metabolism

1. Understanding of fundamental concepts in nutrition and metabolism.
2. Appreciation of all types of nutrition-related research and research conducted in the Division.
3. Ability to conduct literature searches, critically evaluate all types of nutrition-related research and develop rationale for research.
4. Effective communication and translation of knowledge with diverse audiences.
5. Development of collaboration, mentorship, teaching, leadership and civic engagement skills.
6. Application of nutrition and research knowledge and skills in the conduct of nutrition-related research.

Pathways for Core Competency Development

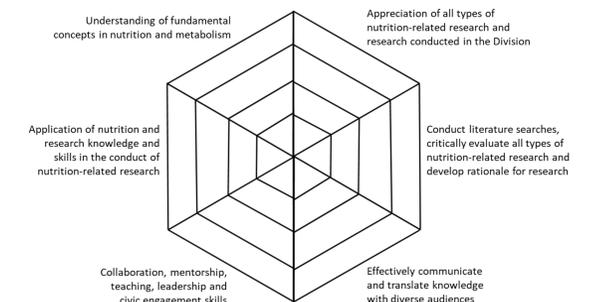


- Core competencies identified were in agreement with other doctoral nutrition programs and doctoral program competencies in general
- Components of each core competency were linked to formal and/or informal pathways for development:
 - Formal pathways include courses, thesis research and writing related to students' research
 - Informal pathways include journal clubs (Golde 2007 *Educational Researcher* 36:344) and directed readings (McAlpine 2012 *Innovations in Education and Teaching International* 49:351)

Development Evaluation

- Doctoral students will complete a self-evaluation of development level for each component of the six competencies.
- With feedback from supervisor and supervisory committee, students will identify pathways to develop competencies in areas identified as gaps in the self evaluation.
- Initial self-evaluation will be completed at the start of the doctoral program and will be updated and reviewed at each supervisory committee meeting.

Core Competency Development Self Evaluation (levels increase from center to outer levels)



Expectations

- Implementation in the Fall of 2018 is expected to standardize the core competencies developed by doctoral students in the program.
- Multiple pathways for development enables students to create an individualized plan most appropriate for them.
- Additional benefits of implementation include providing students more direction for candidacy exam preparation, and the ability to highlight knowledge and skills gained in the program.
- To evaluate the changes in the doctoral program, a survey of students who completed the program prior to and after implementation will be conducted.

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