



# **NUTR\*4090 Functional Foods and Nutraceuticals - DRAFT**

Winter 2019

Section(s): C01

Department of Food Science

Credit Weight: 0.50

Version 1.00 - October 26, 2018

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## **1 Course Details**

### **1.1 Calendar Description**

The course examines the relation of functional foods and nutraceuticals (FFN) to foods and drugs. The safety and efficacy of individual FFN products, and the regulatory issues that influence the development and commercialization of FFN in global markets are emphasized. (Also listed as FOOD\*4090.)

**Pre-Requisite(s):** NUTR\*3210

**Equate(s):** FOOD\*4090

### **1.2 Course Description**

The course is co-operatively taught by the Department of Human Health and Nutritional Sciences and the Department of Food Science.

### **1.3 Timetable**

Tuesdays and Thursdays 10:00-11:20am, MACN 105

### **1.4 Final Exam**

Exam time and location is subject to change. Please see WebAdvisor for the latest information.

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## **2 Instructional Support**

### **2.1 Instructor(s)**

**Kerry Ritchie Dr**

**Email:** ritchiek@uoguelph.ca

**Office:** ANNU ANNEX Rm 265

**Office Hours:** Office hours by appointment

**Paul Spagnuolo Dr**

**Email:** pspagnuo@uoguelph.ca  
**Telephone:** 519-824-4120 x53732  
**Office:** FS 116  
**Office Hours:** Office hours by appointment.

## 2.2 Teaching Assistant(s)

**Teaching Assistant:** TBA TBA

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# 3 Learning Resources

## 3.1 Additional Resource(s)

### CourseLink (Website)

<https://courselink.uoguelph.ca>

There is a CourseLink website for the course. All lecture slides and required readings will be posted ahead of class. You will benefit much more from in-class discussion if you have read the articles prior to class. The CourseLink website will also be very valuable as a learning tool if you contribute to on-line discussions.

Literature readings will be required, but will be kept to the most appropriate articles for the topic. If you are unsure of how to download articles from journal citations, or are having difficulty, you might want to check with the library - <http://www.lib.uoguelph.ca/ask-us>.

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# 4 Learning Outcomes

## 4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Have a comprehensive understanding of what defines functional foods and nutraceuticals (FFN), and use this knowledge to analyze a variety of foods and products.
2. Be aware of regulatory issues pertaining to functional foods and nutraceuticals, including an in-depth understanding of Health Claims and how they are made. Critically evaluate current and proposed health claims based on rigorous evidence.
3. Understand the various research tools used to determine the efficacy of FFN and be able to apply these concepts to new situations.
4. Understand issues related to the development and commercialization of FFN products, and creatively apply these concepts to emerging products.
5. Explain current state-of-the-knowledge with regards to the use of FFN for risk reduction and treatment of chronic diseases, by critically evaluating the evidence used to reach these conclusions.

6. Be aware of research needs in the continuing evolution of FFN.

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## 5 Teaching and Learning Activities

Timelines are approximate and may change slightly to accommodate guest speakers and class based activities.

### 5.1 Lecture

#### Weeks 1-4

**Topic(s):** Development and Commercialization of Functional Foods and Nutraceuticals

- a. The history of FFN
- b. Regulations and Health Claims: Canadian and International Considerations
- c. Product development considerations (extraction and processing of nutraceuticals, development of consumer foods)
- d. Economics & Marketing
- e. Research Approaches to the study of FFN

**Readings:** Primary and review articles as posted on Courselink website. (~ 2 papers per week)

#### Weeks 5-8

**Topic(s):** Safety and Efficacy of Functional Foods and Nutraceutical Products for Risk Reduction of Chronic Diseases

- a. CVD, Cancer, Diabetes, Osteoporosis
- b. Guest speakers & current topics TBA

**Readings:** Primary and review articles as posted on Courselink website. (~ 2 papers per week)

#### Weeks 9-12

**Topic(s):** Special Topics in Functional Foods and Nutraceuticals

- a. FFN for Maintaining and Enhancing Body Image, Performance & Health-span
- b. Special topics (Dietary Fibre, Caffeine, Dairy Products, Red Wine)

**Readings:** Primary and review articles as posted on Courselink website. (~2 papers per week)

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## 6 Assessments

### 6.1 Marking Schemes & Distributions

Name	Scheme A (%)	Scheme B (%)
Midterm #1	30	20
Midterm #2	30	20
Optional Research paper	0	20
Comprehensive Final Exam	40	40
Total	100	100

## 6.2 Assessment Details

### Midterm #1 (30%)

Date: Thu, Feb 7

### Midterm #2 (30%)

Date: Thu, Mar 14

### Comprehensive Final Exam (40%)

Date: DATE TBD

### Optional research paper (0%)

Date: Thu, Mar 28

Students may select to write an optional individual research paper to redistribute the weighting of midterms. More information will be provided in class.

## 7 Course Statements

### 7.1 Grading Policies

#### When You Cannot Meet a Course Requirement:

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact, and be prepared to provide supporting documentation. See the undergraduate calendar for information on regulations and procedures for Academic Consideration: Undergraduate Calendar - Academic Consideration

Note: There will be no make-up midterm exams. Attendance at these lecture times is mandatory. In the event of legitimate absence due to illness or compassionate leave, the other midterm and final exam weighting will be adjusted to 40/60% (or 30/50% for those selecting to write a term paper).

## 8 University Statements

### 8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

### 8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

## 8.3 Drop Date

Courses that are one semester long must be dropped by the end of the fortieth class day; two-semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for course registration are available in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

## 8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

## 8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

More information can be found on the SAS website

<https://www.uoguelph.ca/sas>

## 8.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community-faculty, staff, and

students-to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

## **8.7 Recording of Materials**

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

## **8.8 Resources**

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>

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