

## Quality Assurance Midway Report

### Food Science

Date: September 20<sup>th</sup> 2019 Completed by: Véronic Bézaire

The mid-way report is an opportunity to reflect on the continuous improvements made as result of your last cyclical program review. Please provide a progress report on the items listed in your Action Plan.

	Unit Action Item (July 30, 2017)	Owner & Timeline	Progress Update (June 30, 2019)
1	<p>Hire one new faculty at assistant professor rank; expertise in food toxicology (Hire #1); will teach 1.5 cr in current and future courses and host Honours students</p>	<p><b>Owner:</b> Faculty Dean, Departmental Chair, Hiring Committee</p> <p><b>Timeline:</b> Closing date for applications: October 31st 2017. Start date January 2018. CI – Approved for 2017-18;</p>	<p>The search for a candidate in food toxicology was successful. The new team member (Dr. David McMullin) started on July 1<sup>st</sup> 2018. Dr. McMullin is already making important program contributions through teaching, research, and service.</p>
2	<p>Hire one new faculty at assistant professor or instructor rank; expertise in food industry (Hire #2); will teach 1.5 to 3.0 cr in current and future courses and host Honours students</p> <p>In the meantime, request CI for 1.0 cr (FOOD 3003, 4001)</p>	<p><b>Owner:</b> Faculty Dean, Departmental Chair, Hiring Committee</p> <p><b>Timeline:</b> Discussions with Faculty Dean in Fall 2017. CI – Approved for 2017-18</p>	<p>The request for an assistant professorship (start date 2020) was made to the Dean of the Faculty of Science. This request was denied, citing insufficient enrollment.</p> <p>Adjustments had to be made to handle related courses. FOOD 3004 is not being offered in 2019-20 due to the lack of qualified applicants. FOOD 3003 is being taught in 2019-20 by the faculty Instructor but will now need to be offered in alternating years due to excess workload. Funds for a CI with Industry experience were approved to teach FOOD 4001 in 2017-18, 2018-19, and 2019-20. FOOD 4001 is a core course and must continue to be offered every year.</p> <p>Clearly, our program has teaching needs (FOOD 3003, FOOD 3004, FOOD 4001) that require expertise in the food industry. Our program also has research needs related to food safety, in a manner that is aligned with existing Departmental strengths. The exact profile of a Hire who can fulfill all of the above will be defined in the upcoming year as the Department of Chemistry embarks on a Strategic Planning exercise.</p>

<b>3</b>	<p>Hire new faculty at Instructor rank (Hire #3); will teach 1.0 cr in current and future courses, host Honours students, and build co-op;</p> <p>In the meantime, request CI for 1.0 cr (FOOD 2003, 4102)</p>	<p><b>Owner:</b> Faculty Dean, Departmental Chair, Hiring Committee</p> <p><b>Timeline:</b> Discussions with Faculty Dean in Fall 2018. CI – Approved for 2017-18</p>	<p>In our initial action plan, Hire #3 was proposed to be an Instructor with expertise in food law and regulations; most likely a lawyer. It was proposed to be shared with the Faculty of Public Affairs.</p> <p>No progress has been made on this front. The reality today is that the University of Ottawa has created a School of Nutrition Sciences and now offers a food science program similar to ours. The main difference between our programs is Carleton’s focus on food regulations and policy. The regulatory aspect of food science is also what makes Carleton’s program unique in Canada. Currently, the food regulation courses are being taught by a CI who could leave any time. Hire #3 is crucial to offer stability in the unique aspect of our program. At this point, we believe it may be more important than Hire #2.</p> <p>Instead of sharing a Hire between the Faculty of Science and the Faculty of Public Affairs, we would like to propose a Hire who can strengthen and stabilize the regulatory and policy angle of multiple units within the Faculty of Science. We would therefore like to propose an Instructor Hire with a shared appointment between Chemistry and Health Sciences. Both Departmental Chairs are open to this idea. In Chemistry, the Hire could teach 1.0 credit and expand the co-op program through connections with the Food Industry. In Health Sciences, the Hire could teach 0.5 to 1.0 credit of health regulation courses currently being taught by CIs.</p>
<b>4</b>	<p>Introduce CGPA cutoff for 4907 and 4908 courses.</p> <p>Develop new 4905 Group Honours Workshop course for students below</p>	<p><b>Owner:</b> Departmental Chair, CPR Chair, Current FOOD instructor</p> <p><b>Timeline:</b> Course approved for 2017-18 calendar. Available as an option in 2018-</p>	<p>FOOD 4905 was approved for the 2017-18 calendar year. It will be developed during the summer 2020, ready to be offered for the 2020-21 academic year, when students from the 2017-18 cohort reach fourth year.</p>

	<p>CGPA cutoff or other students who may prefer this option.</p> <p>Request CI for 1.0 cr</p>	<p>19. Effective for all students in 2020-21. CI needed for 2018-19.</p>	<p>The course will be designed and initially delivered by the program faculty Instructor. This will increase the Instructor's teaching load above the 1.5X average researcher's teaching load. In the absence of new hires, the equivalent of 0.5 credit every other year will be required to offset the Instructor teaching load.</p>
5	<p>Continue annual summer FOOD Faculty workshop with course design experts from EDC until all current and future FOOD courses have been revised</p>	<p><b>Owner:</b> FOOD Faculty members, FOOD Contract Instructors, EDC staff</p> <p><b>Timeline:</b> Summer 2017: FOOD 2001, 2004, 2003/4103 Summer 2018: FOOD 1001, FOOD 4102, 4201, 4203, 4002, 4301</p>	<p>The review of all FOOD courses through EDC-led workshops was completed by July 1<sup>st</sup> 2019 as shown in the schedule below:</p> <p>Summer 2017: FOOD 2001, 2004, 2003/4103 Summer 2018: FOOD 1001, FOOD 4201, 4203 Summer 2019: FOOD 2003/4103, 4103, 4002</p> <p>Future plans are to revisit courses as requested by the course Instructor or by the student population, rather than do so systematically.</p>
6	<p>Develop mandatory 2000-level Scientific Writing Course Hire one new faculty at assistant professor or instructor rank; expertise in food industry (Hire #2); will teach 1.5 to 3.0 cr in current and future courses; will permit redistribution of teaching load among Faculty</p>	<p><b>Owner:</b> CPR Chair, Current FOOD Instructor</p> <p><b>Timeline:</b> Course approved for 2017-18 calendar; syllabus developed in summer 2017. Discussions with Faculty Dean in Fall 2017/2018.</p>	<p>FOOD 2004 Scientific Writing in Food Science and Nutrition was offered in the 2017-18 calendar year as an optional course. It was offered as a mandatory course in 2018-19 and will continue as such. Student feedback suggests that the course is a lot of work, but really important to their learning.</p> <p>FOOD 2004 is currently being taught by the Food Science faculty Instructor. There is no Hire #2 or Hire #3 to better redistribute the teaching load.</p>
7	<p>Add learning outcomes associated with critical thinking and professional ethics to FOOD 4001, 4102, and 4103</p>	<p><b>Owner:</b> FOOD Faculty members, FOOD Contract Instructors, EDC staff</p> <p><b>Timeline:</b> Summer 2017 and 2018, as per FOOD workshop schedule</p>	<p>Learning outcomes for critical thinking have been added to several courses including the following FOOD 4000-level courses: 4102, 4103, 4201, 4203.</p> <p>Learning outcomes for professional ethics are more difficult to incorporate but are being added for FOOD 4102 and 4103. A learning outcome relating to professional ethics should also be added to FOOD 4001. This will be done once there is less Instructor turnover for this course.</p>

8	<p>Set maximum number of students per section to 8</p>	<p><b>Owner:</b> Departmental Chair, FOOD lab Instructors, FOOD lab Coordinator Peter Mosher</p> <p><b>Timeline:</b> Effective 2016-17; to be reviewed annually.</p>	<p>We have been successful in setting and respecting a maximum number of students in FOOD lab courses. We will continue to monitor enrollment and ensure reasonable numbers of students.</p>
9	<p>Maintain number of lab sections per term per coordinator in line with other units</p> <p>Evaluate need for additional lab space and new laboratory coordinator with experience in microbiology and chemistry</p>	<p><b>Owner:</b> Departmental Chair, FOOD lab Instructors, FOOD lab Coordinator Peter Mosher</p> <p><b>Timeline:</b> To be reviewed annually based on enrollment figures</p>	<p><b>Space:</b> The laboratory was reorganized to optimize space usage. The space is functional for now, but it needs to be revisited on a yearly basis.</p> <p>One non-FOOD laboratory course (nano) is still being held in the Food Science teaching lab. Equipment for this lab occupies bench space that could and should be used for Food Science. The issue will be raised again with the Departmental Chair.</p> <p><b>Lab coordinator workload:</b> A change in laboratory coordinator has taken place in Food Science. For the 2019-2020 calendar year, the lab coordinator will run labs in three existing FOOD courses (FOOD 3001, FOOD 3002, FOOD 3005). For each course, the coordinator will be responsible for two or three sections. Many recommendations made during summer course reviews have been made but not yet implemented. The new lab coordinator will incorporate those recommendations over the next two years, including the development of practical lab exams.</p> <p>The coordinator will also be developing a new lab-based course (FOOD 4002) from scratch. The coordinator will start by offering 1 lab section of the course this winter but more sections may be required in the future since the course will also be available to students registered in a chemistry concentration in toxicology.</p> <p>The lab coordinator may also be asked to teach CHEM 3107 or 2 lab section of Organic Chemistry. Food Science Faculty believe the lab coordinator should dedicate all of her energy to FOOD labs, not to other Chemistry labs. This is important to ensure that</p>

			<p>FOOD labs are problem-free and of appropriate difficulty level. Issues with FOOD lab courses, including appropriate university-level complexity has been a challenge for the past nine years. It is crucial for the FOOD lab coordinator to dedicate all her energy to FOOD specific labs to resolve all issues.</p> <p>The proposed workload of laboratory coordinators in Chemistry still appears disproportionately high relative to other units, in particular, with Biology.</p>
10	<p>Develop mandatory 2000-level Food Processing Course</p> <p>Hire one new faculty at assistant professor rank or instructor rank; expertise in food industry (Hire #2) ; will teach 1.5 to 3.0 cr in current and future courses; will permit redistribution of teaching load</p> <p>In the meantime, request CI for 0.5 cr</p>	<p><b>Owner:</b> Faculty Dean, Departmental Chair, Hiring committee</p> <p><b>Timeline:</b> Course approved for 2017-18 calendar; syllabus developed in summer 2017 Decision on new Instructor hire will be made in Fall 2017; CI – Approved for 2017-18;</p>	<p>FOOD 2002 Food Processing was offered in the 2017-18 calendar year as an optional course. It was offered as a mandatory course in 2018-19 and will continue as such. It has become an important prerequisite for several 3000-level courses.</p>
11	<p>Seek methods to improve assessment efficiency</p> <p>Assess impact of learning outcome assessment practices</p>	<p><b>Owner:</b> CPR Chair, FOOD Faculty members, Office of Quality Assurance, Office of Quality Initiatives</p> <p><b>Timeline:</b> Fall 2017, Fall 2018</p>	<p>For the past four years, the Food Science program has been using an Instructor-led selection of artifacts to review LOs during the summer months. Conversations with OQA and EDC to improve upon this approach started in the fall 2017. In 2018, the Food Science program decided to develop and pilot a program-level cuPortfolio for assessment of LOs. In theory, this approach should benefit students by having them select and reflect on artifacts of program LOs.</p> <p>The program-level cuPortfolio was developed and launched as a pilot project for the 2018-19 academic year at all levels. While some challenges were noted, the program-level cuPortfolio appears quite effective for gathering student artifacts, and for encouraging students to reflect on their learning. The process is being revised for Year 2 of the pilot. Minor modifications will be</p>

			made but overall, the use of cuPortfolio to assess learning outcomes will improve assessment efficiency.
12	<p>Hire one new faculty at assistant professor rank; expertise in food toxicology (Hire #1)</p> <p><b>(Same as row 1 above)</b></p>	<p><b>Owner:</b> Faculty Dean, Departmental Chair, Hiring Committee</p> <p><b>Timeline:</b> Closing date for applications: October 31st 2017. Start date January 2018.</p>	<p>The search for a candidate in food toxicology was successful. The new team member (Dr. David McMullin) started on July 1<sup>st</sup> 2018. Dr. McMullin is making important program contributions through teaching, research, and service.</p>
13	<p>Hire one new faculty at assistant professor rank or instructor rank; expertise in food industry (Hire #2)</p> <p><b>(Same as row 2 above)</b></p>	<p><b>Owner:</b> Faculty Dean, Departmental Chair, Hiring Committee</p> <p><b>Timeline:</b> Discussions with Faculty Dean in Fall 2017.</p>	<p>The request for an assistant professorship (start date 2020) was made to the Dean of the Faculty of Science. This request was denied, citing insufficient enrollment.</p> <p>Adjustments had to be made to handle related courses. FOOD 3004 is not being offered in 2019-20 due to the lack of qualified applicants. FOOD 3003 is being taught in 2019-20 by the faculty Instructor but will now need to be offered in alternating years due to excess workload. Funds for a CI with Industry experience were approved to teach FOOD 4001 in 2017-18, 2018-19, and 2019-20. This course is a core course and must continue to be offered every year.</p> <p>Clearly, our program has teaching needs (FOOD 3003, FOOD 3004, FOOD 4001) that require expertise in the food industry. Our program also has research needs related to food safety, in a manner that is aligned with existing Departmental strengths. The exact profile of a Hire who can fulfill all of the above will be defined in the upcoming year as the Department of Chemistry embarks on a Strategic Planning exercise.</p>
14	<p>Hire one new faculty at Instructor rank; expertise in food law and regulation; to be shared in FPA (Hire #3)</p> <p><b>(Same as row 3 above)</b></p>	<p><b>Owner:</b> Faculty Deans (Science, Public Affairs), Departmental Chair, Hiring Committee</p> <p><b>Timeline:</b> Discussions with Faculty Deans in Fall 2018.</p>	<p>In our initial action plan, Hire #3 was proposed to be an Instructor with expertise in food law and regulations; most likely a lawyer. It was proposed to be shared with the Faculty of Public Affairs.</p> <p>No progress has been made on this front. The reality today is that the University of Ottawa has created a School of Nutrition</p>

			<p>Sciences and now offers a food science program similar to ours. The main difference between our programs is Carleton's focus on food regulations and policy. The regulatory aspect of food science is also what makes Carleton's program unique in Canada. Currently, the food regulation courses are being taught by a CI who could leave any time. Hire #3 is crucial to offer stability in the unique aspect of our program. At this point, we believe it may be more important than Hire #2.</p> <p>Instead of sharing a Hire between the Faculty of Science and the Faculty of Public Affairs, we would like to propose a Hire who can strengthen and stabilize the regulatory and policy angle of multiple units within the Faculty of Science. We would therefore like to propose an Instructor Hire with a shared appointment between Chemistry and Health Sciences. Both Departmental Chairs are open to this idea. In Chemistry, the Hire could teach 1.0 credit and expand the co-op program through connections with the Food Industry. In Health Sciences, the Hire could teach 0.5 to 1.0 credit of health regulation courses currently being taught by CIs.</p>
15	Discussion on revision of program name	<p><b>Owner:</b> Departmental Chair, FOOD faculty members</p> <p><b>Timeline:</b> Fall 2017</p>	<p>Food Science faculty members decided to change the program name from 'Food Science and Nutrition' to 'Food Science', effective for the 2019-20 academic year.</p> <p>The motivation for the change was two-fold: 1) to accurately represent the program, which specializes in food science, not nutrition; and 2) to minimize confusion between the program and the new School of Nutrition Sciences at the University of Ottawa.</p>