

FINAL ASSESSMENT REPORT - DRAFT

Institutional Quality Assurance Program (IQAP) Review

Medical Radiation Sciences

Date of Review: February 5 - 6, 2018

*In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the **Medical Radiation Sciences** programs delivered by the School of Interdisciplinary Science. This report identifies the significant strengths of the programs, together with opportunities for program improvement and enhancement, and it sets out and prioritizes the recommendations that have been selected for implementation.*

The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources entailed by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations and who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

Executive Summary of the Cyclical Program Review of the Undergraduate

Medical Radiation Sciences Program

In accordance with the Institutional Quality Assurance Process (IQAP), the School of Interdisciplinary Science submitted a self-study in January 2018 to the Vice-Provost, Faculty to initiate the cyclical program review of its undergraduate programs. The approved self-study presented program descriptions, learning outcomes, and analyses of data provided by the Office of Institutional Research and Analysis. Appendices to the self-study contained all course outlines associated with the program and the CVs for each full-time member in the department.

Two arm's length external reviewers, one from New Brunswick and one from Halifax and one internal reviewer were endorsed by the Dean, Faculty of Science, and selected by the Vice-Provost, Faculty. The review team reviewed the self-study documentation and then conducted a site visit to McMaster University on February 5 - 6, 2018. The visit included interviews with the Provost and Vice-President (Academic); Vice-Provost, Faculty, Director of the School and meetings with groups of current undergraduate students, full-time faculty and support staff.

The Director of the School and the Dean of the Faculty of Science submitted responses to the Reviewers' Report (August 2018). Specific recommendations were discussed and clarifications and corrections were presented. Follow-up actions and timelines were included.

Strengths

In their report (February 2018), the Review team noted that all professors and management are very supportive of the students and the program. Together they provide a high-quality discipline specific curriculum. It was noted that the program effectively integrates elements of experiential learning, self-directed learning and interdisciplinarity throughout the student experience. There is effective monitoring of quality assurance through various processes. There is a high level of student satisfaction, excellent certification results and positive feedback from employers. The reviewers were impressed by the integrated nature of the IAHS building, the quality of the facilities and the simulation equipment. The existence of a capital equipment purchase plan for replacing older equipment was highlighted as a commendable initiative.

Areas of Improvement

In their report, the Review Team identified some recommendations for areas of improvement including:

- Improve selection process to identify student with more aptitude for MRSc
- Opportunities for additional interdisciplinary learning in levels 1 to 3 through collaboration with FHS
- Incorporate academic modules in P/F courses (skills assessment and clinical placement)
- Explore pathway opportunities such as dual certification
- Explore non-traditional sites (clinics) for clinical placements

The Dean of the Faculty of Science, in consultation with the Director of the School of Interdisciplinary Science shall be responsible for monitoring the recommendations implementation plan. The details of the progress made will be presented in the progress report and filed in the Vice-Provost, Faculty's office.

Summary of the Reviewers' Recommendations with the Department's and Dean's Responses

Implementation Plan

Recommendation	Proposed Follow-Up	Responsibility for Leading Follow-Up	Timeline for Addressing Recommendation
"Investigate the possibility of an optional MRSc honours" Page 8	The School of Interdisciplinary Science (SIS) curriculum committee have initiated a review of the current curriculum in order to determine the scope of the changes required to open this option to the MRSc students	Prof Ana Campos (SIS Director) and Dr. Kim Dej (Associate Director of Curriculum)	Timeline will depend on the scope of the changes required. Minimally 2 years.
"Consider adjunct faculty appointment status for Mohawk faculty (especially	The MRSc Steering committee will be consulted and asked to arrive at a process at this level. Mohawk Associate Dean of	Prof Ana Campos, Director of SIS, will add this item to the agenda of the next	Applications should be collected during the 18-19 academic

<p>those interested in conducting research)” Page 8</p>	<p>Allied Health should be in charge of forwarding the applications with their support to the Steering committee first. Any adjunct appointment in the School of Interdisciplinary Science (SIS) must be approved by the school executive council as the home academic unit that will host this appointment.</p>	<p>MRSc Steering committee for discussion.</p>	<p>year for consideration.</p>
<p>“Investigate developing partnerships with other MRSc programs to facilitate study abroad initiatives” Page 8</p>	<p>The Medical Radiation Sciences program is exploring a number of international partnerships at this time. International connections and awareness of global health issues are areas of interest and growth opportunities.</p> <ol style="list-style-type: none"> 1. The program is expecting a visit in late July by Safora Johansen (Oslo Metropolitan University, Oslo Norway) to discuss the expansion of an academic partnership with Dalhousie University to include McMaster/Mohawk. (Research collaborations for RT/Rad). 2. The program is exploring a possible partnership/exchange with Cardiff University (Cardiff, Wales). Exchange for Rad. 3. Expansion of the institutions research in Point of Care Ultrasound training and applications has provided opportunities for students to engage in international research and training 	<p>Wendy Lawson, AD Special Projects, Mohawk College will coordinate the initial information collection and contacts. Wendy will liaise with SIS as appropriate to arrange dialogue with each group.</p>	<p>First contacts have been made in all cases. Further exploration and meetings with SIS to be planned for the 18/19 academic year.</p>

	<p>abroad. Current development of research collaboration with Latin America in Hemophilia management.</p> <p>Exploration of Collaborations with EduAfrica to provide abroad training opportunities/service learning for our students in Africa.</p>		
<p>“Explore the formation of a Rad-Aid chapter at the university” Page 8</p>	<p>RAD-AID international is an international aid organization focused on increasing and improving radiology for poor and developing countries.</p> <p>Imaging the World is sponsored by the WHO to build medical imaging capabilities where healthcare resources are scarce and has been recognized for outstanding social innovation in health.</p> <p>The Medical Radiation Sciences program is exploring the formation of a partnership/chapter with one/both of these organizations.</p>	<p>Wendy Lawson has reached out to both organizations for information.</p> <p>A proposal will be presented to SIS for consideration of next steps.</p>	<p>Presentation of opportunities with Rad-Aid and/or Imaging the World to be presented to Ana Campos and Kevin Diamond in Fall 2018.</p>
<p>“Align Mohawk and McMaster MRSc websites to ensure consistency of program description and information” Page 9</p>	<p>SIS website (McMaster side) is undergoing a complete redesign. It is due to go live sometime in mid to late Fall. The faculty of the Science IT team will be forwarding the first complete mock version of the new website very soon. At this point we will share and consult with our Mohawk colleagues such that modifications can be implemented to achieve consistent information in both websites.</p>	<p>SIS Director and SIS website team</p>	<p>Fall term 2018</p>

<p>“Continue to ensure students have various avenues to explore the three specializations in Level 1” Page 9</p>	<p>There are in place significant opportunities for the students to make informed choices embedded in the 1F03 course designed specifically to introduce the specializations. It includes guest lectures by practicing professionals, graduates and upper year students as well as a panel question and answer session. There are laboratory tours with faculty and student demonstrations and extensive online resources and assignments that focus on researching the scope, legislation, physical and mental demands of the professions. Additionally, the Mohawk faculty works with the MRSc student society to host additional information sessions during the evening of Term 1.</p> <p>We will continue to consult program faculty and students on ways to further highlight and engage students in these resources moving forward.</p>	<p>1F03 instructor, SIS Director, Mohawk Associate Dean</p>	<p>Immediate</p>
<p>“If the radiography and radiation therapy specialization students continue to complete the current CT course together, it will be important to provide more radiation therapy specific content and radiation therapy faculty involvement” Page 11</p>	<p>We have already made modifications to the core CT course MRSc 3K03 effective F2018 separating CT labs by specialization. While all students take the same lecture components for this course, new radiation therapy specific labs were created in 2017 and are taught by radiation therapy faculty. We have also started having regular team meetings weekly for the delivery team to ensure appropriate communication regarding outcomes to ensure alignment with assessments.</p>	<p>Mohawk Associate Dean</p>	<p>Immediate</p>

<p>“Academic modules with assigned grades could be integrated into courses with a specialization skills assessment of clinical component. At present these courses are pass/fail and not included in the GPA calculation.”</p>	<p>This suggestion is currently being discussed at the level of various Mohawk-McMaster Joint Committees for feasibility and will be considered as part of a wider review of courses for an Honours BMRSc.</p>	<p>Medical Radiation Sciences Program Coordinator (SIS)</p>	<p>Fall 2021</p>
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Dean’s Response, Faculty of Science:

The Dean would like to thank the members of the review team for their engagement and enthusiasm during the site visit and for their thoughtful and encouraging report, including the recommendations and suggestions. The Dean would like to thank also the members of the School of Interdisciplinary Science and the representatives from the School of Health at Mohawk College for preparing the Program Response.

The Dean noted that the reviewers report highlighted several areas of strength in this undergraduate program in Medical Radiation Sciences. In particular, the report highlighted the unique and effective nature of the collaboration between McMaster University and Mohawk College in terms of the program structure and oversight, but also in terms of the joint commitment to reflection, assessment and adjustment of the program to meet the desired academic outcomes and provide high quality experiential opportunities. The review team recommendations have provided areas for continued improvement and consideration and have all be incorporated into a plan for moving forward. Importantly, the key individuals (and institutions) responsible for advancing the identified responses to the specific recommendations have been detailed in the Program Response. It is reflective of the program that these recommendations will be led by individuals both at McMaster and at Mohawk. The Dean confirmed that she supports all of the proposed actions highlighted in the program response and in particular supports the recommendation in the report to consider the development of an “honours stream” as an option in the existing program. The Dean agreed with the review team’s assessment that shifting the complete program to meet the degree level requirements for an Honours Science degree would be a comprehensive undertaking that might not meet the needs and aspirations of many of the stakeholders. In contrast, the option to provide an honours stream for some students might result in attainment of several of the recommendations outlined in the report through direct or indirect activities associated with the associated curriculum and resource changes.

The Dean further noted that while the Faculty of Science is incredibly committed to the continued success of this joint program, she would like to emphasizes that transparency and collaboration with respect to all levels of oversight and governance will continue to be crucial. The changing models for funding of Universities and Colleges and adjustments in fiscal management and governance by both

Mohawk and McMaster mean that all program level decisions must be reviewed and supported, at all levels, by both institutions. As the Faculty of Science moves forward with our commitment to excellence in undergraduate education, we will monitor our progress with respect to the individual recommendations of the review team and engage in our highly valued partnership with Mohawk College in refining and delivering this excellent undergraduate program in Medical Radiation Sciences.

Quality Assurance Committee Recommendations

McMaster's Quality Assurance Committee (QAC) reviewed the above documentation and the committee recommends that the program should follow the regular course of action with a progress report and subsequent full external cyclical review to be conducted no later than 8 years after the start of the last review.