



Anatomy and Cell Biology Final Assessment Report

Faculty / Affiliated University College	Schulich School of Medicine & Dentistry
Degrees Offered	Bachelor of Medical Science (Honours)
Modules Reviewed	Honours Specialization in Medical Cell Biology Major in Medical Cell Biology
External Consultants	Dr. Tarek M Saleh, Professor and Chair Department of Biomedical Sciences Ontario Veterinary College University of Guelph Dr. Richard Oko, Professor Department of Biomedical and Molecular Science Queen's University
Internal Reviewers	Joan Finegan, Associate Dean Faculty of Social Science
Date of Site Visit	February 5, 2018
Evaluation	Good Quality
Approval Dates	SUPR-U: May 16, 2018 SCAPA: May 30, 2018 Senate:

Executive Summary

During the day-long visit, the reviewers met with administrators, faculty members, staff, teaching assistants, librarians, and students in the program. The clear impression from all these groups was that the program in Medical Cell Biology is a strong one that easily meets the University's strategic priorities. The Department itself is research intensive, learning centred, collaborative and involved in opening learning. Teaching is shared amongst faculty who are dedicated to teaching (and research on teaching innovation) as well as faculty members who have the more traditional split on teaching and research. Courses include written assignments, debates, ethical discussions, grant writing and other activities that foster critical thinking skills. The reviewers conclude by saying: "In general, Anatomy and Cell Biology is an innovative, successful program. ... Based on the documentation provided, site visit and the interviews, the undergraduate courses within this program have achieved a good level of quality on all outcomes and the program is sustainable".

Significant Strengths of the Program

1. The faculty have won many teaching awards, and several have published peer-reviewed articles on teaching innovations in the classroom as well as on assessment criteria. The courses themselves involve cutting-edge technologies, including virtual histology slide sets. One course is piloting a virtual 3D model of a renal corpuscle.
2. Courses are team taught by highly trained and competent people, thereby ensuring the students experience different teaching styles and perspectives.
3. Class sizes are generally small. Most courses have fewer than 30 students, though the popular human anatomy and histology has 100 registrants.

4. The honours thesis project ensures that students have first-hand experience in a research lab. This course clearly meets the Ministry's definition of a "workplace simulated environment"
5. The students in this program are strong and enthusiastic. More than 95% finish their degree within the recommended time.

Suggestions for Improvement & Enhancement

1. Students enter this program after two years in Science. A number of people raised the concern that many students were not aware of the program. The reviewers offered two suggestions to increase the program's visibility. First, Anatomy 3319 could be split into two half-courses, with the first half-course taught in second year. The Department is investigating the feasibility of this suggestion. Second, students who receive an 85% in the second-year Cell Biology course could be sent a letter introducing them to the module.
2. While the honours thesis is a clear strength of the program, it could be redesigned to include more structure so that students have clear expectations as they go along and are able to complete the thesis in a timely fashion. The Department will implement this suggestion.
3. The Department should conduct a short-term and a long-term succession plan for equipment repair and replacement. Currently replacement of microscopes is dependent on the Science Student Donation Fund. Since the review, the Department obtained reserve funds for laboratory equipment that should reduce reliance on the student donation fund. That said, an assessment should also be done of the most effective and efficient methods to deliver course objectives. (Perhaps replacing microscopes is no longer the best alternative.)
4. Because of limitations in streaming live audio and video (and permitting live two-way interactions) in courses, the reviewers suggested that the University should conduct an audit of IT services in support of undergraduate programs, a suggestion the Department enthusiastically endorses.

Recommendations Required for Program Sustainability

Recommendation	Responsibility
Enhance communication and recruitment of prospective students, such as providing students identified through the intent to register process, with detailed program information on the HSP in Anatomy and Cell Biology in Year 2	Faculty
Short-term and long-term succession plan for equipment repair and replacement	Department
Review of IT resources and software available to support live streaming of audio and video required to effectively deliver the online components of courses in Histology and Human Anatomy	University