



## Physiology and Pharmacology Final Assessment Report

<b>Faculty / Affiliated University College</b>	Faculty of Science <u>and</u> Schulich School of Medicine & Dentistry
<b>Degrees Offered</b>	Bachelor of Medical Science (Honours) Bachelor of Medical Science (four-year)
<b>Modules Reviewed</b>	Honours Specialization Physiology Honours Specialization Pharmacology Honours Specialization Physiology & Pharmacology Specialization in Pharmacology Specialization in Physiology Major in Physiology Major in Pharmacology
<b>External Consultants</b>	Dr. Alastair Ferguson, Professor, Department of Biomedical & Molecular Science, Queen's University Dr. Venkat Gopalakrishnan, Professor and Head, Department of Pharmacology, University of Saskatoon
<b>Internal Reviewers</b>	Joan Finegan, Associate Dean, Faculty of Social Science
<b>Date of Site Visit</b>	April 10, 2018
<b>Evaluation</b>	<b>Good Quality</b>
<b>Approval Dates</b>	SUPR-U: June 6, 2018 SCAPA: Senate:

### Executive Summary

Reviewers met with representatives of senior administration (Karen Campbell, Vice-Provost, Academic Planning, Policy and Faculty; John Doerksen Vice-Provost, Academic Programs), administration in Basic Medical Sciences (Candace Gibson Assistant Dean; Doug Jones, Vice Dean) as well as with the Chair and Undergraduate Chair in Physiology/Pharmacology. They also met with the Manager and Coordinator for the Basic Medical Sciences as well as faculty members, administrative and technical staff within the department. The librarians provided a fulsome description of the library resources and a group of undergraduates endorsed the program enthusiastically.

The Department of Physiology and Pharmacology is a merged department that maintains its two distinct disciplines while at the same time transitioning to an interdisciplinary education. The reviewers believe that the department should be encouraged to embrace the notion of a truly interdisciplinary undergraduate program. Their new laboratory course in Physiology/Pharmacology is a positive step in this direction.

Overall, the program has healthy enrolments (though the numbers in pharmacology are lower) and is staffed by faculty (both teaching-only faculty and traditional faculty members) and staff who are dedicated to providing students with an excellent undergraduate education. It is consistent with Western's mission, values and strategic priorities, and experiential learning forms a significant component of the program.

### Significant Strengths of the Program

1. The students express high levels of satisfaction, and indicators, such as academic awards, attrition, time to completion, teaching evaluations, suggest that the program is of high quality.

2. The new physiology/pharmacology laboratory course represents the successful merger of the two disciplines and contributes to a “well trained holistic undergraduate degree holder”
3. The resources to run the program are adequate. One particularly outstanding example is the renovated lab space, which demonstrates how different departments can work together effectively.
4. The fourth-year thesis is an important capstone to the degree. (Though the number of students who can take this course is constrained by the number of faculty members who are willing to supervise them, the modules are well subscribed and growth is not a goal. Faculty members are expected to take one student and encouraged to take more.)
5. The atmosphere is collegial. The Chair and Undergraduate Chair have the confidence and support of faculty and staff. The teaching and research faculty work well together and are knowledgeable in the area. The reviewers were particularly impressed by the exceptional job the teaching faculty does and urged the department to safeguard their interests.

**Suggestions for Improvement & Enhancement**

1. The evolution towards a true interdisciplinary education needs to continue. One example of this would be to change the current second-year course in physiology to one that includes physiology and pharmacology.
2. Courses in pharmacogenetics, pharmacoeconomics, pharmacovigilance would complement the program and provide a foundation for a dual degree in Physiology/Pharmacology and Ivey’s Honors Business Administration. Such a degree does not exist in North America and it would be attractive to the Pharmaceutical/Biotechnology sectors.
3. The Department should develop strategies to handle gaps in expertise, in particular, in the areas of Renal, Gastrointestinal and Endocrine Physiology/Pharmacology. The Department hopes to fill these gaps when hiring to replace recent retirements and departures.
4. The reviewers also believed that, in the spirit of interdisciplinary, the number of modules should be reduced and that this would be achieved by the continued integration of physiology and pharmacology.

**Recommendations Required for Program Sustainability**

Recommendation	Responsibility
Create a dual degree with Ivey HBA	Department and Ivey Business School
Ensure gaps in expertise are filled	Department and Faculty
Include more pharmacology in the second-year physiology courses	Department
Reduce the number of modules.	Department