CARLETON UNIVERSITY COMMITTEE ON QUALITY ASSURANCE
Cyclical Review of the undergraduate programs in Biomedical and Electrical Engineering

Executive Summary

This Executive Summary and Final Assessment Report of the cyclical review of Carleton's undergraduate programs in Biomedical and Electrical Engineering are provided pursuant to the provincial Quality Assurance Framework and Carleton's Institutional Quality Assurance Process (IQAP).

EXECUTIVE SUMMARY

The undergraduate programs in Biomedical and Electrical Engineering reside in the Department of Systems and Computer Engineering.

A cyclical review of these programs was completed in conjunction with the accreditation review process undertaken by the CEAB.

As a result of the review, the programs were categorised by the SQAPC as being of **GOOD QUALITY**. (Carleton's IQAP 7.2.12).

The Report of the Visiting Team offered a very positive assessment of the programs. Within the context of this positive assessment, the report nonetheless made a number of recommendations for the continuing enhancement of the programs. These recommendations were productively addressed by the unit Director, and Dean of the Faculty of Engineering and Design in a Unit Response and Action Plan that was submitted to SQAPC May 7, 2020.

Action Plan
Biomedical and Electrical Engineering
Undergraduate Programs

May 21 2020

External Reviewer Recommendation & Categorization **Note: Definitions from CEAB Accreditation Standards:** **Concern: Criterion satisfied; potential exists for non-satisfaction in near future.** **Weakness: Criterion satisfied; insufficient strength of compliance to assure quality of program will be maintained.** **Deficiency: Criterion not satisfied.**	**Action Item**	**Owner**	**Timeline**	**Will the action described require calendar changes? (Y or N)**
1. *Deficiency: The set of specific technical engineering courses that distinguishes the Biomedical and Electrical Engineering program from an Electrical or Computer Systems program are confined to the 4th year. Students taking the Capstone Design project course in the 7th semester have not had any program-specific technical courses before-hand. The question remains as to whether this is an engineering program or an option in an existing program. (Criterion 3.6.6 and Appendix 4 "Interpretive Statement on curriculum content for options and dual-discipline programs)*	*1) A new course SYSC 3610 – Biomedical Systems Modeling and Control was created and replaced SYSC 3600 – Systems and Simulations.* *2) SYSC 3203 – Bioelectrical Systems was added to replace ELEC 3509 Electronics II* *3) The course SYSC 4201 – Ethics, Research Methods and Standards for Biomedical Engineering was updated and*	*The Department of Systems and Computer Engineering*	*The changes in curriculum were made and were applied to students entering the program in Fall 2014*	*Y*

	moved from 4th year to 3rd year. *4) SYSC 4203 – Bioinstrumentation and Signals, with SYSC 3203 as a prerequisite was significantly modified to focus on bio-compatiblitiy issues in the context of biomedical instrumentations.* *The four courses are opened only to students in the biomedical engineering programs.*			