Engineering Faculty Document No. 51-22
December 1, 2021

TO: The Faculty of the College of Engineering

FROM: The Faculty of the Weldon School of Biomedical Engineering

RE: Online Delivery Added to Existing Degree, Online Master's in Biomedical Engineering

The faculty of the Weldon School of Biomedical Engineering have approved the following new delivery option for the existing Master's in Biomedical Engineering degree. This action is now submitted to the Engineering Faculty with a recommendation for approval.

Description: Students enrolled in the online Master's in Biomedical Engineering program will participate in the same courses and degree requirements as on-campus non-thesis Master's students (e.g., Professional Master's students). All courses can be completed online.

Reason: The need for biomedical engineers continues to grow (https://www.bls.gov/ooh/architecture-and-engineering/biomedical-engineers.htm) and demand for a Purdue engineering education is increasing, with record numbers of students. BME currently offers an online concentration through interdisciplinary engineering and will soon be starting a graduate certificate program with an online option. Offering an online MS will provide another option for students to pursue a nonthesis degree, similar to the expanding on-campus Professional Master's program. The online approach is similar to successful programs offered by other engineering schools at Purdue. Additionally, the recent demand for online education due to the Covid-19 pandemic has demonstrated that online can be an effective delivery mode that allows increased flexibility and is supported by Purdue's renowned online education program.

Coursework Required (total 30 credits)*:

BME (6 credits or equivalency required)
Life Science (3 credits)
Quantitative/Analytical (3 credits)
Regulatory Affairs and Professional Skills (12 credits)
Graduate Electives for Specialization (6 credits)

*identical to current non-thesis Master's in Biomedical Engineering degree requirements

Sample Plan of Study for online MS in Biomedical Engineering (Full-time example)

Semester 1 - Fall	12 credits • BME 501 Biostatistics *(Quantitative / Analytical)* • BME 561 Preclinical and Clinical Study *(Regulatory Affairs and Professional Skills)* • BME 511 Biomedical Signal Processing *(Biomedical Engineering)* • BME 556 Introduction to Clinical Medicine *(Life Sciences)*
Semester 2 - Spring	12 credits • BME 581 Fundamentals of MEMS *(Biomedical Engineering)* • BME 562 Regulatory Approval Around Medical Devices *(Regulatory Affairs and Professional Skills)* • BME 564 Engineering Ethics *(Regulatory Affairs and Professional Skills)* • BME 595 Polymeric Biomaterials *(Graduate Electives for Specialization)*
Semester 3 - Summer	6 credits • BME 563 Regulatory Compliance for Medical Devices *(Regulatory Affairs and Professional Skills)* • *Graduate Electives for Specialization (e.g., GRAD 590 Project Management)*

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