

SYSC 4907 – Fall 2026/Winter 2027

Supervisor	Rose Gomar
Co-supervisor	
Course section	SYSC 4907 E
Project ID	E1
Project title	FPGA-Accelerated Muscle Fatigue Monitor for Athletes
Project description	<p>This project develops a high-performance solution for athletes and physical therapy patients to monitor muscle exhaustion in real-time. By leveraging the FPGA architectures, the system detects physiological signs of fatigue before physical performance drops or injury occurs.</p> <p>Note: Students must have a background in Digital Signal Processing (either already passed the DSP course or are currently enrolled). Interested students should first reach out via email, include their résumé, and briefly describe their relevant background. Meetings with eligible students will be scheduled on a first-come, first-served basis. Students must form a team before contacting. At least one computer systems student must be included in the team.</p>
Program(s)	Biomedical and Electrical Computer Systems Software
Maximum number of students	Minimum 4 students -maximum 5 students
Meeting time with supervisor (optional)	Will be set later
Do you want the student to contact you before the office assign this project to them ? (Yes/No)	yes