

**SYSC 4907 – Fall 2026/Winter 2027**

Supervisor	Rose Gomar
Co-supervisor	
Course section	SYSC 4907 E
<b>Project ID</b>	E2
Project title	Smart Splint for Post-Op Rehab
Project description	<p>Traditional rehabilitation relies on periodic clinical visits where a therapist manually measures a patient's progress. However, the most critical phase of recovery happens daily at home. Without professional supervision, patients often perform exercises incorrectly or lose motivation because they cannot visualize their incremental improvements, leading to longer recovery times and suboptimal clinical outcomes. Patients recovering from wrist or knee surgery often struggle with home exercises. The Smart Splint tracks their Range of Motion (ROM). The Smart Recovery Splint transforms a standard orthopedic support into an active diagnostic tool. By continuously monitoring the joint's Range of Motion (ROM) during daily activities and prescribed exercises, the system provides immediate, objective data on flexibility and movement quality.</p> <p><b>Note:</b> 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 3 students -maximum 4 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