

# ***GRADUATE COURSE IN REHABILITATION ENGINEERING***

**UNIVERSITY OF SOUTH FLORIDA**



## **Rehabilitation Engineering Applied to Mobility and Manipulation**

**EML 6930-901**

- Department: Department of Mechanical Engineering
- Instructor: Rajiv V. Dubey  
Office: ENC 2303  
974-2280/5619, [dubey@eng.usf.edu](mailto:dubey@eng.usf.edu)
- Semester: Summer Session C (May 16<sup>th</sup> – July 18<sup>th</sup>)
- Time: 6:00 PM - 9:00 PM, Wednesdays
- Place: TBD
- Text Book: "Rehabilitation Engineering Applied to Mobility and Manipulation" by Rory A Cooper, Institute of Physics Publishing, 1995
- Goals: The purpose of this course is to introduce engineering principles and provide a foundation in rehabilitation engineering as applied to mobility and manipulation.
- Prerequisite: Undergraduate coursework in engineering. Non-engineering majors require approval from the instructor prior to course registration.
- Topics:
- Introduction
  - Fundamentals of Rehabilitation Engineering Design
  - Biomechanics of Mobility and Manipulation
  - Universal Design and Accessibility
  - Personal Transportation
  - Wheelchair Safety, Standards and Testing
  - Manual and Power Wheelchair Design
  - Postural Support and Seating
  - Prosthetics and Orthotics
  - Recreational Devices and Vehicles
  - Rehabilitation Robotics