SAN JOSÉ STATE UNIVERSITY
Mechanical and Aerospace Engineering Department

ME 106 - Term Project Information Fall 1998

The term project is a chance for you to apply your newly learned skills in Mechatronics to design and build a device to solve a particular problem. Students in previous semesters have consistently rated the term project as one of the best aspects of the course. I hope you will find this to be true as well.

The Little Sojourner Project

Inspired by the Mars Sojourner explorer, this semester's project will be to design and build a remotely controlled ground vehicle that can maneuver around and over various obstacles, pick up a small rock, maneuver back around the same obstacles, and accurately place the rock in a target area. Details and rules for the project can be found at http://asme.org/students/design_contest/index.html. (If you are a member of ASME, you can enter your vehicle in the 1999 ASME Student Design Contest to be held March 27-28, 1999 at UC Davis. There will be a pre-contest held at SJSU on February 6, 1999 as well.)

You will work on the project in teams of 2 to 4 people. Grading of the project will be carried out using the following criteria:

- **Concept** (20%) Your device will be judged on its technical merits, including, innovation, appropriate use of hardware and software, and application of physical and engineering principles in the design.
- **Implementation** (20%) Your device will be judged on how well it is presented at the project evaluation session. The focus here will be on the quality of workmanship and finished appearance.
- **Performance** (20%) Your device will be judged on how well it performed during the project evaluation session.
- **Report** (20%) This aspect focuses on the completeness and quality of your written documentation of the device. A key feature will be, "How easy would it be for someone acquainted with Mechatronics to understand, reproduce, and/or modify this design as documented?"
- **Individual Contribution** (20%) This aspect will address the quality of each group member's contribution to the outcome of the term project.

The last two laboratory sessions will be devoted to project work. You ***will*** need additional time to complete your project, so I suggest you start early.

You will demonstrate your project to the class on December 8, 1998 during the normal class session, extending through that afternoon's lab session, so plan accordingly.

Key Dates	Deliverables
9-21-98	Team formation and submission of the team information sheet (fill out and submit the vital information sheet, ME106vital_info.zip)
10-5-98	Concepts with sketches (at least 10)
10-12-98	System block diagram, calculations, preliminary test results
11-9-98	First working prototype
11-24 to 12-8-98	Open laboratory sessions for project work
12-8-98	Presentation of term projects and project reports