

University of Nevada, Reno
Department of Mechanical Engineering

MECHANICAL ENGINEERING 150
STUDENT CONTRACT

Section I: Course Format

Mechanical Engineering 150 consists of three instructional tracks: 1) Discussion, 2) Skills Lab, and 3) Projects Lab.

The Projects Lab will simulate a corporate environment. There are six divisions (sections) in the corporation managed by Dr. Jesse Adams. Within each Division, there are 4 or 5 development teams. Each development team is headed by an elected Project Manager.

The mission of each development team is to develop a low cost digital postal scale by November 20, 2002. The cost of developing the scale will come directly from the team members (and project manager) and is limited to \$25 per person. Any components received for no cost must be assessed at fair market value and included in the total cost.

Section II: Course Objectives

The objectives of MECH 150 are to learn: about mechanical engineering as a career, about the curriculum at UNR, how to work on a team, about the design process, and about engineering ethics. Students should also become proficient at basic hand graphics, basic computer skills, using spreadsheets, technical writing, and giving technical presentations.

Section III: Student Teams

Student Teams: For the Projects Lab portion of the course, each student team will consist of 5-6 Team Members and an elected Project Manager. Teams will be assigned but it is up to each team to elect a Project Manager.

Project Managers: Each manager will receive up to a maximum of **1500 Merit Pay points (500 more than normal)** for the semester. In addition to participating in the team project, Project Managers must also attend a weekly management meeting (Thursday 1-2PM). Project Managers are responsible for:

- Providing a development schedule (CPM chart)
- Assigning tasks to members
- Insuring members are productive (Personnel Evaluations)
- Chairing and organizing team meetings (agendas & minutes)
- Mediating discrepancies at meetings
- Insuring each team member is treated with respect
- Meeting with the course instructor
- Picking up team grades
- Requesting performance reviews (see below)

Team Members: Each team member will earn **Merit Pay** as recommended by the Project Manager. Team members are expected to:

- Demonstrate writing, speaking, and graphics skills
- Actively participate in team meetings
- Demonstrate an understanding of all parts of the product
- Respect and listen to other team members

Section IV: Performance Evaluations

Performance Reviews: Project Managers and Teaching Assistants have the authority to request a performance review of any individual student who displays unsatisfactory conduct or performance. The course instructor will serve as the judicator for all performance reviews. At the performance review, both the Project Manager and the student in question will answer inquiries put forth by the course faculty. Based on this review, the course instructor may take one of five actions: 1) dismiss all charges, 2) penalize the student by deducting points 3) place the student on probation, 4) transfer student to another team, or 5) eject the student from the course.

A student on probation will undergo another performance review not later than 3 weeks subsequent to the implementation of probationary status. At this review, the student's conduct and performance will be re-evaluated. Based on this evaluation, the course faculty may take one of four actions: 1) remove student from probation, 2) extend the probationary period 3) penalize the student by deducting points, or 4) eject the student from the course.

A student ejected from the course will be dropped from the course and receive either an Incomplete (I) or a Failing (F) grade.

Personnel Evaluations: Each time an oral or written report (including final presentation and report) is due, a Personnel Evaluation Form must be completed by the Project Manager for each team member. The Evaluation must be signed and dated by the person being evaluated before it will be accepted. The Evaluations will be used to determine the Merit Pay portion of the total grade. Each team member must also complete a Manager Evaluation Form which is submitted in confidence directly to the teaching assistants. This form will be used to determine the Project Manager's Merit Pay.

Section V: Grading

The final grade consists of four components:

Discussion	1000 points
Skills Lab	3000 points
Project Lab	5000 points (transferable points)
Merit Pay	1000 points

The final grade is based on the following scale:

number of points	equivalent Grade
≥9,301	A
9,001-9,300	A-
8,701-9,000	B+
8,301-8,700	B
8,001-8,300	B-
7,701-8,000	C+
7,301-7,700	C
7,001-7,300	C-
6,701-7,000	D+
6,301-6,700	D
6,001-6,300	D-
≤6,000	F

Note: it is possible to earn more than 10,000 points.

Discussion: Attendance will be taken during 10 of the Monday discussion sections. Together these will constitute 10% (1,000 points) of the overall grade (100 points per discussion section).

Skills Lab Assignments: There will be 7 Skills Lab assignments each worth 300-400 points and one quiz worth 600 points. Combined, the assignments and quiz represent 30% of the total course grade

(3,000 points). Skills Lab assignments are due at the beginning of the Skills Lab on the date specified in the syllabus.

No assignments will be accepted after the due date.

Projects Lab: For the 3 written reports, 2 oral reports, final written report, and final oral presentation all team members will receive the same number of points regardless of individual contribution. Thus, there will be a maximum of 5,000 points available to each team member:

Description of Team Concept (written)	600 points
Analysis Report (written)	600 points
Design Review (Oral)	600 points
Test Results (written)	600 points
Prototype Demo (Oral)	600 points
Final Presentation	1000 points
Final Report	1000 points
Total	5000 points

The 5000 performance points will serve as currency that can be used to sub-contract work with other teams. The “price” for services rendered is negotiated by the teams. It is therefore possible for a team to accumulate more than 5000 points by the end of the semester.

Merit Pay: Merit pay constitutes 10% of the total grade (1000 points). Merit Pay is awarded for individual effort within the team. Personnel Evaluation Forms are submitted by the Project Manager after each graded oral or written report is returned (including the final presentation and report). The Project Manager will have 20% of the awarded points multiplied by the number of team members (not including project manager) to distribute among the team members as he/she sees fit based on merit. For example, a team with 4 team members plus 1 project manager that received 500 points on a report would earn:

$$(20\%) \times (500 \text{ points}) \times (4 \text{ members}) = 400 \text{ total merit points}$$

to divide among the 4 members. All Merit Pay is subject to approval by the instructor. Personnel Evaluation Forms must be signed by both the Project Manager and the team member being evaluated. Personnel Evaluation Forms are due within 1 week of the notification of report scores.

Project Managers can receive up to 1500 Merit Pay points as compensation for extra duties and responsibilities (see § III). Manager Evaluation Forms completed by team members and final team project grade will determine the exact amount of Merit Pay received at the end of the term.

Peer Evaluations: Each team will be provided with a peer evaluation form that is to be completed the last week of class. Any team member receiving an average peer evaluation rating of less than 55 will receive a Failing (F) grade in the course, regardless of the points he/she has earned.

Disability Statement: If you have a disability for which you will need to request accommodations, please contact any of the instructors or Mary Zabel at the Disability Resource Center (Thompson Student Services - 107) as soon as possible to arrange for appropriate accommodations.

Additional Information: Additional information, including, but not limited to, the syllabus and skills lab assignments, can be found on the Internet at <http://web.me.unr.edu/me150>.

Detach and submit to course instructor by the end of class Sept. 4, 2002

I have read, understood and accept all of the conditions set forth in this Mechanical Engineering 150 Student Contract:

Student signature

Date

Print Name: _____

Email address