MONTANA STATE UNIVERSITY -- BOZEMAN
DEPARTMENT OF MECHANICAL & INDUSTRIAL ENGINEERING

MECHANICAL ENGINEERING INTERNSHIP PROGRAM

Engineering Internship (EI) for Mechanical Engineering Majors is a career-related paid employment experience of 10-15 weeks duration. Academic credit in EMEC 498 Internship for Mechanical Engineering (ME) Majors is assigned based on the estimated engineering content of the internship. Normally, two or three semester credits are assigned per internship. A student must be at least in junior standing in the ME Major with EMEC 303 Computer Aided Engineering III - Systems Analysis, EMEC 320 Thermodynamics I, and EMEC 341 Advanced Mechanics of Materials, all satisfactorily completed (grade C- or higher) before registration for internship work. The student must register in EMEC 498 during the term that the internship work is performed. Internship students will work with professionals in their field at a wage commensurate with the assignment level and technical ability required. A maximum of three professional elective (PE) credits applicable to the mechanical engineering major are allowed for the engineering internship course.

Employer Responsibilities

Internship employers will provide:

- position descriptions for each internship
- work related to the student's major field of study at a wage commensurate with the level and ability required
- supervision from a trained professional -- preferably an engineer
- a written evaluation of the student's performance at the end of the work period

The person acting as supervisor of the intern and the person completing the written evaluation of the intern's work may *not* be the parent, legal guardian, or a close relative of the intern. As part of earning academic credit for the internship, the intern is expected to report the engineering work performed in detail to the Engineering Internship Coordinator. Therefore, work assignments for which the engineering work product of the intern, e.g., drawings, specifications, and work schedules, are regarded as proprietary or confidential, are generally not suitable for engineering internships which earn academic credit. Work assignments that are predominantly manual fabrication or manual labor, e.g., painting, welding, machine tool operation, carpentry, or installation of plumbing, are also not suitable for engineering internships which earn academic credit.

Each company can use its own process to select students for engineering internships. Companies may set requirements as to prior work experience, academic level, and minimum grade point average achievement. Offers of internship employment including term, salary, and work assignment, originate with the company and not with the University or academic department.

Student Responsibilities

Internship students (interns) will:

- apply only for work assignments for which they have a serious interest
- perform work of professional quality and effort
- follow company policies and procedures
- complete all reporting requirements for the employer and the EI Program

Internship contracts for the summer term should be finalized by the end of the week following the final examination week for the spring semester. Internship contracts for fall semester or spring semester should be finalized by the end of the first week of classes. The University publishes deadlines for adding or withdrawing from courses. Those deadlines are applicable to enrollment in the EMEC 498 Internship course.

Department Responsibilities

The Department of Mechanical and Industrial Engineering, acting through the Engineering Internship Coordinator, will:

- review, may modify, and may approve the internship contract for academic credit
- register students in the appropriate number of credits of internship coursework
- monitor progress of students during the work assignment
- evaluate the Final Report and other communications related to the internship and assign the final grade for the internship

Internship Qualification

The Department of Mechanical and Industrial Engineering, acting through the Engineering Internship Coordinator, will review and may approve internships and work assignments based on the following criteria:

- the company must employ engineers
- the intern will work under the supervision of an engineer or a professional of similar qualification
- the company and EI Coordinator identify and develop suitable job descriptions
- work assignments must be of an engineering nature and consistent with the education and experience of the intern

Formal Internship Requirements

Registration in Course: Students with mechanical engineering internship assignments must be enrolled in EMEC 498 Internship for Mechanical Engineering Majors during the term that the internship work is performed. The course, credit, and grade appear on the student's transcript. Up to three passing semester credits (grade C- or higher) may be used to fulfill professional elective (PE) requirements in the mechanical engineering curriculum.

Cost: With registration in the one-credit, two-credit, or three-credit course, associated tuition costs apply. That expense, plus others which are typically incurred include:

Tuition Various Academic Fees Travel Rent Damage Deposit

Written Reports: Interns and employers will provide written reports to the EI Coordinator.

Reports from the student include:

- completed Internship Contract, including tasks and responsibilities assigned
- Bi-Weekly Progress Reports
- Final Report

Reporting from the employer requires completion of a written evaluation of the intern's performance. Employer reports should include employee strengths, weaknesses, and suggestions for performance improvement.

MONTANA STATE UNIVERSITY -- BOZEMAN
DEPARTMENT OF MECHANICAL & INDUSTRIAL ENGINEERING

MECHANICAL ENGINEERING INTERNSHIP CONTRACT

Course EMEC 498 Internship Credit Hours_____ Date_____

Academic Year _____ Fall _____ Spring _____ Summer _____

_____ _____
Student Name GID #

_____ _____
E-Mail Address Phone

_____ _____
E-Mail Address during Internship Phone during Internship

The student will intern with_____
Organization

_____
Address

_____ _____
City/State Phone

Type of organization _____

Student will be supervised by (please print) _____

Supervisor's position is (examples: Mechanical Engineer, Chemist, Senior Scientist, etc.)

_____

Intern will be assigned to _____
Department or Division

Student Responsibilities

1. Student will complete the following assignments to be evaluated by the Engineering Internship Coordinator.

   A. Bi-Weekly Reports (1-2 pages; what was done and plans for next two weeks)
   B. Final Report (complete report summarizing accomplishments; including examples of the engineering work performed)

2. Student will conform to the general work requirements, typical workday schedule, and other standards of the sponsoring organization.

3. Student will be assigned the following task(s) during the internship term. (See accompanying instructions to Intern Supervisors before completing this section.)

   A. _____

   B. _____

   C. _____

   D. _____

   E. _____

   F. _____

   G. _____

   H. _____

4. In addition to progress on the tasks above, the final grade will be based, in part, on (1) a written evaluation by the supervisor upon completion of the internship, (2) content of the Bi-Weekly Reports, and (3) content of the Final Report.

Supervisor Responsibilities

1. The sponsoring organization will provide the intern with supervision, training, and resources necessary to perform assigned tasks.

2. The sponsoring organization will immediately notify the Engineering Internship Coordinator should early termination of the internship become necessary.

3. The sponsoring organization will provide a written evaluation of performance of the intern upon completion of the internship.

_____ _____
Student Date

_____ _____
Industry Supervisor Date

_____ _____
Mechanical Engineering Internship Coordinator Date

MONTANA STATE UNIVERSITY -- BOZEMAN
DEPARTMENT OF MECHANICAL & INDUSTRIAL ENGINEERING

MECHANICAL ENGINEERING INTERNSHIP PROGRAM

To Intern Supervisors:

In the Internship Contract - Item #3, descriptive language is needed from you in order to evaluate the responsibilities and tasks that our engineering intern will be assigned. The student will be enrolled in the senior-level course EMEC 498 Internship for Mechanical Engineering Majors. If performance is satisfactory, the student will receive academic credit (usually 2 or 3 semester credits) for the engineering work that they accomplished in industry. The internship should draw on the skills the intern has gained from completed coursework and it should provide an appropriate technical challenge.

From the details you provide, we will determine:

- Is there technical problem development or specification?
- Is there information gathering and assessment?
- Is there development of alternative solutions to technical problems?
- Will the intern make decisions based on engineering knowledge?
- Is there potential for the intern to gain skills, confidence, and professional attitude for future employment as an engineer?
- Will the intern be regularly exposed to engineers doing work?

The person acting as supervisor of the intern and the person completing the evaluation of the intern's work may *not* be the parent, legal guardian, or a close relative of the intern. As part of earning academic credit for the internship, the intern is expected to report the engineering work performed in detail to the Engineering Internship Coordinator. Therefore, work assignments for which the engineering work product of the intern, e.g., drawings, specifications, and work schedules, are regarded as proprietary or confidential are generally *not* suitable for engineering internships which earn academic credit. Work assignments that are predominantly manual fabrication or manual labor, e.g., welding, painting, machine tool operation, carpentry, or installation of plumbing, are also *not* suitable for engineering internships which earn academic credit.

Please keep these considerations in mind as you complete Item #3 in the Internship Contract. Thank you for providing this valuable experience for one of our engineering students.

MONTANA STATE UNIVERSITY -- BOZEMAN
DEPARTMENT OF MECHANICAL & INDUSTRIAL ENGINEERING

MECHANICAL ENGINEERING INTERNSHIP PROGRAM

BI-WEEKLY REPORT FORM

For Period Beginning Monday _____
Month Day Year

STUDENT _____

EMPLOYER _____

STUDENT'S MAILING ADDRESS _____
Street

_____ _____ _____ Phone ( ) _____
City State Zip Area Code

Bi-Weekly Reports are submitted to the Engineering Internship Coordinator for Mechanical Engineering (currently, Alan H. George, Ph.D., P.E., ageorge@montana.edu, phone 406-994-6282) as e-mail attachments in MS Word or Acrobat Reader (pdf) format. To expedite the filing of your report, please name the attachment as follows: LastName_Bi_Wk_day_month_year. For example: Jones_Bi_Wk_30_Oct_2016. The date referred to is the start of the interval for which the report applies, not the date of submission of the report.

For the EMEC 498 Internship course, the learning objectives are not to be considered rigid. They should be flexible guideposts to direct your learning efforts. Learning should be thought of as any skill, knowledge, understanding, or professional attitude you have improved upon or achieved for the first time. The learning can be related to the technical, human relations, management, or marketing areas. However, the emphasis should be on engineering methods and analyses applied to technical problems. Use your Final Report Form as a possible guideline for some of your weekly objectives. It is suggested that you should keep a daily journal to be used in completing this form. Also, this form should be completed in a manner which will facilitate writing the Final Report.

I. List specific objectives and milestones you had during the past two weeks.

II. Describe your progress in meeting the objectives. (Compare against milestones established during previous report.)

III. Describe learning achieved during the past two weeks by new unforeseen experiences or specific incidents which took place not related to your objectives.

IV. List objectives for the next two weeks. Include a list of milestones with dates.

V. Indicate any questions for the Engineering Internship Coordinator.

MONTANA STATE UNIVERSITY -- BOZEMAN
DEPARTMENT OF MECHANICAL & INDUSTRIAL ENGINEERING

FORMAT FOR MECHANICAL ENGINEERING INTERNSHIP FINAL REPORT

ORDER OF APPEARANCE:

1. **Title Page**

2. **Abstract** The abstract contains a brief statement of the purpose of the Final Report and summary of conclusions (about one page).

3. **Table of Contents**

4. **Introduction** State the purpose of the report. Give a general, brief description of the work including company, location, supervisor, etc.

5. **Detailed Description of Work** It is important to emphasize the engineering tools and analyses that you applied to technical problems. The engineering work products created by the intern must be clearly documented. Where appropriate, include examples, computations, drawings, etc. If these are lengthy, put them in an appendix and refer to them. This section will contain much of the same information that you submitted in your Bi-Weekly Reports.

6. **Evaluation of the Internship Experience** Discuss the various aspects of the internship including the value (positive or negative) relative to your academic pursuits and professional development. Include any other technical or non-technical items learned but not mentioned above.

7. **Suggestions for Improving the Internship Experience**

8. **Appendices**

Notes:

1. The Final Report may be typed single-spaced or double-spaced between lines but must be consistent throughout. Reports should be printed on plain white paper and fastened by a staple or bound.
2. Your Final Report will be evaluated and considered as part of the overall grade for your internship. The report should be sufficiently detailed that a general reader could understand and evaluate your accomplishments. Supplemental materials such as drawings, computations, product information, etc., should be included if appropriate.
3. The Final Report must be submitted both as hardcopy (paper) and in MS Word or Acrobat Reader (pdf) format by the date specified by the Engineering Internship Coordinator.

Montana State University - Bozeman

Department of Mechanical and Industrial Engineering

Mechanical Engineering
Intern Performance Review

Intern Name: _____

Company: _____

Review Date: _____

Reviewer: _____

Part 1

Goals of the Performance Review

Evaluate the intern's work performance

Inform the intern of strengths and weaknesses

Improve job performance by providing feedback and suggestions

Overall Job Performance

Ranking

1 - Well below expectations

2 - Slightly below expectations

3 - Consistent with expectations

4 - Above expectations

5 - Far exceeds expectations

N/A - no opportunity to observe

Category							Feedback
Technical Ability	1	2	3	4	5	N/A	
Planning	1	2	3	4	5	N/A	
Interpersonal Skills	1	2	3	4	5	N/A	
Decision Making	1	2	3	4	5	N/A	
Creative Ability	1	2	3	4	5	N/A	
Productivity	1	2	3	4	5	N/A	
Initiative	1	2	3	4	5	N/A	
Communications	1	2	3	4	5	N/A	
Teamwork	1	2	3	4	5	N/A	
Safety	1	2	3	4	5	N/A	
Overall Evaluation	1	2	3	4	5	N/A	

Part 2 - Performance on Specific Job Assignments

Assigned Task	Performance Feedback

Part 3 - Supervisor's Comments

Positive Feedback:	Concerns:
Specific suggestions for performance improvement and personal growth:	

This performance review becomes part of the intern's file for the EMEC 498 Internship course. Please return this completed form (or a copy) directly to:

By regular mail (USPS):

Alan H. George, Ph.D., P. E.
Engineering Internship Coordinator for Mechanical Engineering
Montana State University
Department of Mechanical and Industrial Engineering
P. O. Box 173800
Bozeman, MT 59717-3800

Or, by FAX or e-mail:

Engineering Internship Coordinator for Mechanical Engineering
Alan H. George, Ph.D., P. E.
e-mail: ageorge@montana.edu
Phone 406-994-6282
FAX 406-994-6292