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# MAJOR MILESTONE SCHEDULE
(2013-2014)\(^1\)

<table>
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<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
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<tr>
<td>Project Solicitation</td>
<td>August – Mid-October 2013</td>
</tr>
<tr>
<td>Team/ Project Assignments, AME 4163</td>
<td>October 17, 2013</td>
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<td>Strategic Plan/ Team Organization, AME 4163</td>
<td>Mid-November 2013</td>
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<tr>
<td>Plan of Action, AME 4163</td>
<td>December 12, 2013</td>
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<tr>
<td>Mid-Term Design Review (Mid-Term Report and Oral Presentation)</td>
<td>Mar. 11 and Mar. 13, 2014 (Tuesday and Thursday)</td>
</tr>
<tr>
<td>Final Design Review (Draft Final Report and Oral Presentation)</td>
<td>April 22 and April 24, 2014 (Tuesday and Thursday)</td>
</tr>
<tr>
<td>Final Report</td>
<td>April 29, 2014 (Tuesday)</td>
</tr>
<tr>
<td>Poster Fair/ Final Prototype</td>
<td>May 1, 2014 (Thursday)</td>
</tr>
<tr>
<td>Completion of Project and Deliverables Due Date</td>
<td>May 2, 2014 (Friday)</td>
</tr>
</tbody>
</table>

\(^1\) Check class announcements for any last minute changes. Guidelines, format requirements, and evaluation forms for reports and presentations are provided in this document.
## WEEKLY MILESTONES: SPRING 2014

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Jan 16-19</td>
<td>Review Project Objectives and Goals;</td>
</tr>
<tr>
<td>2. Jan 20-26</td>
<td>Weekly Progress Report;</td>
</tr>
<tr>
<td>4. Feb 3-9</td>
<td>Weekly Progress Report;</td>
</tr>
<tr>
<td>5. Feb 10-16</td>
<td>Weekly Progress Report;</td>
</tr>
<tr>
<td>7. Feb 24-March 1</td>
<td>Weekly Progress Report;</td>
</tr>
<tr>
<td>8. March 2-8</td>
<td>Weekly Progress Report;</td>
</tr>
<tr>
<td>9. March 9-15</td>
<td>Weekly Progress Report; Mid-Term Report Due</td>
</tr>
<tr>
<td></td>
<td>Mid-Term Presentation March 11 and 13</td>
</tr>
<tr>
<td>March 16-22</td>
<td>Spring Break</td>
</tr>
<tr>
<td>11. March 30-April 5</td>
<td>Weekly Progress Report;</td>
</tr>
<tr>
<td>12. April 6-12</td>
<td>Weekly Progress Report;</td>
</tr>
<tr>
<td></td>
<td>Final Presentation April 22 or 24</td>
</tr>
<tr>
<td>15. April 27-May 2</td>
<td>Weekly Progress Report; Final Report Due (April 29)</td>
</tr>
<tr>
<td></td>
<td>Poster Fair Design Competition / Final Prototype Designs (May 1)</td>
</tr>
<tr>
<td></td>
<td>Team Evaluation Due</td>
</tr>
<tr>
<td></td>
<td>Final Deliverables Due and Completion of Project Due (May 2)</td>
</tr>
<tr>
<td>16. May 5-9</td>
<td>Final Exam Week</td>
</tr>
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SAMPLE PRESENTATION SCHEDULE: SPRING 2011
PRESENTATION SCHEDULE FOR SPRING 2014 WILL BE POSTED LATER
**Spring 2011**  
AME 4553: Senior Design Practicum  
Final Presentation Schedule  
Devon Energy Hall (Rooms 220 & 320)

**Tuesday, April 26, 2011**

<table>
<thead>
<tr>
<th>TIME</th>
<th>SESSION A (DEH 220)</th>
<th>SESSION B (DEH 320)</th>
</tr>
</thead>
</table>
| 1:30-2:00 | Radiator Plugged Problem  
OGE/Chang | Stalford | Liquid Transportation Rail  
Car Level Gauge  
ONEOK/Matt/Altan | Aktas |
| 2:00-2:30 | Lake Bailles Project  
OGE/Song | Chang | Laparoscopic Device Design and Prototyping  
Dr. Hassoun/Altan | Siddique |
| 2:30-3:00 | Weld Processes for 9% Cr Material  
OGE/Stalford | Song | Cylindrical Polarimetric Phased Array Radar (CPPAR) Frame Design  
Atmospheric Radar Research Center (ARRC)/Siddique | Altan |
| 3:00-3:30 | MEMS  
Schlumberger/Stalford | Song | Sooner Powered Vehicle  
Altan | Siddique |
| 3:30-4:00 | Sooner Off Road  
Siddique | Song | | Chang |

**Thursday, April 28, 2011**

<table>
<thead>
<tr>
<th>TIME</th>
<th>SESSION A (DEH 220)</th>
<th>SESSION B (DEH 320)</th>
</tr>
</thead>
</table>
| 1:30-2:00 | Drive Shaft Vibration Test Bench  
Halliburton/Chang | Siddique | Gas Gathering System Optimization  
Chesapeake/Song | Aktas |
| 2:00-2:30 | HT-2000 Pump – Valve Seat Removal Upgrade  
Halliburton/Chang | Siddique | Reciprocating Seal Test  
Fixure  
Baker Hughes/Song | Altan |
| 2:30-3:00 | Radiator Design Flow Test  
Halliburton/Siddique | Chang | Development of Solutions to Welding in Cold Environments With High Humidity  
Schlumberger/Chang | Altan |
| 3:00-3:30 | Sooner Racing Team  
Siddique | Stalford | Automating Drilling Processes  
Apache Corp./Altan | Aktas |

**Each TEAM must:**  
1. Upload/test your presentation in the meeting room during 1:00 pm-1:30 pm. Make sure you run through your PPT and resolve any computer/projection issues during that time.  
2. Prepare for 20 minute presentation + 5 minute Q&A + 5 minute setup  
3. Submit a copy of your presentation on properly labeled CD to your advisor  

**Each TEAM Member must:**  
4. Attend at least SEVEN presentations in addition to your own.  
5. Evaluate each presentation attended using evaluation sheet (to be provided). You may choose the presentation you wish to attend. However, seating in each room is limited and will be available on a first-come basis. You may move between rooms only at the end of a presentation. Submit your evaluation sheets to Chenshui Chen or Levent Akbas.
GRADING CRITERION

The first deliverable of the program:

   (1) Plan of Action

is part of AME4163: Principles of Design. Check course syllabus of AME4163 for grade information.

The grade in AME4553: Senior Design Practicum consists of two components; group grade and individual grade.

**Group Grade**
- Mid-Term Report and Presentation 25%
- Final Presentation/Poster Fair 25%
- Final Report 20%

**Individual Grade**
- Weekly Progress Report 10%
- Participation/Class Assignments 10%
- Subjective Evaluation 10%

A = 90-100%   B = 80-89.99%   C = 70-79.99%   D = 60-69.99%   F = Below 60%

Minor variations in grade composition may occur among instructors. A group grade is assigned to everyone in the team. The individual grade would however differ and thus, determine your final grade in the course. Each team member must prepare and submit a weekly report. Attendance is mandatory at group meetings, class meetings, and presentations (mid-term, final, and guest lectures). Subjective Team Evaluation is based on input from team members. Subjective Advisor Evaluation is based on faculty advisor impression, and may include input from sponsors, colleagues, team members, technical staff, and external judges. 25% of grade for project completion by due date is all or none.
SPECIAL RECOGNITION

We believe that excellence in teamwork is important and must be recognized. Thus, following awards are presented to the Best Teams after final design presentations:

**Best Presentation Award**: This award recognizes the team with the best Final Presentation. The selection is based on the numerical score from audience using the Presentation Evaluation Form.

**Best Poster Award**: This award recognizes the team with the best poster display as determined by our panel of judges.

**Best Project Awards**: These awards recognize teams with the best overall effort. Awards are determined by panel of industrial judges. 3 to 9 awards are anticipated in this category.
PLAN OF ACTION FOR CAPSTONE PROJECT

The Plan of Action is 10% of your AME 4163 Grade. Project 1 will be scaled to 90%. You need to submit a copy to your Capstone Advisor and a copy to Dr. Siddique.

Cover Letter: Addressed to sponsor and introducing the plan of action, original signature of the team communicator.

Cover Page: project title, submitted to, submitted by XYZ corporation, and date.

Signature page: typewritten names and original signature of each team member.

Executive Summary: Summarize the important aspects of the plan

Table of Contents

Introduction/Background: Introduce the problem, provide background information, develop a comprehensive statement of the existing situation the plan is designed to handle and explain the need to solve it.

Desired End Product: Identify the nature and function of the end product desired.

Design Requirements: List detailed design and function requirements and specifications.

Technical Approach: Describe overall approach for the problem. Identify major steps, and develop a flow chart or sequence of operation. Explain the steps.
  - Is the plan clearly expressed and understandable?
  - Is the plan actually clever and bright enough to achieve the purpose?
  - Is the plan broad enough to fully accomplish the purpose?
  - Is it do-able?
  - Does it take existing resources or lack of them into consideration?

Schedule: Identify duration of each major task using a Gantt chart

Budget Statement: List items to be purchased and approximate cost. Justify the budget.

Facilities and Resources: Identify/list facilities and resources required for project completion. These include space, computer resources, machining facilities, and other project specific needs.

Team Organization: List team structure and posts taken by each team member. Describe functions and products of each post taken by each team member.
Policy: The team must operate within the framework of policy, i.e., long-range truths or facts, which are not subject to change, expressed as operational rules or guides. The policy must be known and understood by all members of the team.

References

Appendices (as needed)

Submission Date: December 12, 2013 @ 4:30 PM
Use the structure shown below to organize the team. Detailed functions of each of these divisions, further subdivided into department shall be discussed in class or provided separately.

**TEAM LEADER (Manager of Project) forms the EXECUTIVE DIVISION** - This division supervises the activities so that the organization runs smoothly to produce and deliver a high quality product to the sponsor. The Team Leader is responsible for providing leadership to the project team; directing the project’s resources; developing the project plan; applying lessons learned on the project; ensuring that the project is completed on time, within budget, and with acceptable quality; and plays a primary role interfacing and coordinating with sponsor and Capstone advisor.

**TEAM INTEGRATOR forms the COORDINATION DIVISION** - This division establishes a coordinated and functioning organization. The Team Integrator is responsible for integrating all written inputs from team members (plan of action, weekly reports, mid-term and final reports, mid-term and final presentation, and poster Fair display) into a well-written document and adding an executive summary.

**TEAM ACCOUNTANT forms the FINANCE DIVISION** - This division handles the finances and cares for assets so that the product is delivered within budget constraints. The Team Accountant prepares and provides budget and invoice statements for all reports; makes purchase orders and maintains an electronic record of all purchases and expenditures using table format in WORD document providing the following information of all items purchased: company from which purchased, manufacturer of product, product number, product description, quantity, and cost.

**TECHNICAL GROUP #1 forms the TECHNICAL DIVISION** - This division provides a high quality product within the time constraints. The Technical Group #1 is composed of all team members and is responsible for performing all engineering work on the project such as analysis and design; procurement and preparation; and production and construction.

**TECHNICAL GROUP #2 forms the QUALIFICATION DIVISION** - This division ensures that the product meet or exceeds the expected level of quality. The Technical Group #2 is composed of all team members and is responsible for performing all qualifying engineering work on the project such as testing and validation; and review and feedback.

**TEAM PUBLIC RELATIONS LIAISON forms the PUBLIC DIVISION** - This division delivers the product to the sponsor, and generates public (e.g., students, community, and industry) interest in the capstone design program. The Team Public Relations Liaison performs all public relations duties on the project and serves as the team’s liaison on the Capstone Poster Fair Design Competition Committee.
* Light shaded boxes are departments of the faculty coach. Dark shaded box “Review and Feedback” is sponsors’ department. All other boxes represent posts taken up by student team members.
Figure 1. Detailed Organizational Structure of a Capstone Design Course
Roles and functions of each department are outlined in Figure 2(a)-2(f).

### Executive Division

<table>
<thead>
<tr>
<th>Department</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capstone Program</td>
<td>• Engineering principles are followed&lt;br&gt;• Capstone program policies are followed&lt;br&gt;• Required machine shop, computer, and other facilities are available&lt;br&gt;• Facilities are operational and in good repair</td>
</tr>
<tr>
<td>Sponsor Affairs</td>
<td>• Appropriate project statements are secured&lt;br&gt;• Confidentiality and intellectual property agreements are executed&lt;br&gt;• Legal matters are cared for</td>
</tr>
<tr>
<td>Planning and Execution</td>
<td>• Establish goals and purposes&lt;br&gt;• Develop long-term and short-term plans&lt;br&gt;• Get plans executed to achieve the objectives</td>
</tr>
</tbody>
</table>

Figure 2a. Departmental Functions of the Executive Division

### Coordination Division

<table>
<thead>
<tr>
<th>Department</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>• Form team by matching eligible students with the project and/or sponsor&lt;br&gt;• Instruct teams about capstone program and its organization&lt;br&gt;• Ensure that all positions are filled with team members understanding roles and responsibilities</td>
</tr>
<tr>
<td>Communication</td>
<td>• Establish e-mail, phone and other contact information&lt;br&gt;• Ensure prompt communication within the team and between team and the outside, including faculty coach and sponsor</td>
</tr>
<tr>
<td>Records and Reports</td>
<td>• Maintain project folder, records, and catalogues, etc.&lt;br&gt;• Collect and present production data for executive use&lt;br&gt;• Synchronize individual inputs to prepare group reports and presentations</td>
</tr>
<tr>
<td>Ethics and Inspection</td>
<td>• Maintain a high level of ethical behavior among team members&lt;br&gt;• Identify and correct sources of poor production&lt;br&gt;• Inspect team activities to detect/handle potential difficulties</td>
</tr>
</tbody>
</table>
Figure 2b. Departmental Functions of the Coordination Division

<table>
<thead>
<tr>
<th>Finance Division</th>
<th>Functions</th>
</tr>
</thead>
</table>
| **Income**       | • Handle incoming funds to properly record them  
                   • Authorize funds for disbursement |
| **Disbursement** | • Seek approval to disburse funds  
                   • Disburse funds in compliance with the University system  
                   • Maintain financial records including copies of purchase receipts |
| **Inventory**    | • Maintain inventory of purchased items  
                   • Preserve assets and reserves in good order |

Figure 2c. Departmental Functions of the Finance Division

<table>
<thead>
<tr>
<th>Technical Division</th>
<th>Functions</th>
</tr>
</thead>
</table>
| **Analysis and Design** | • Conduct research to develop conceptual ideas  
                                      • Perform analyses to assimilate data and develop designs  
                                      • Identify objects and resources needed for production |
| **Procurement/Preparation** | • Procure objects needed for production, ensuring their timely arrival  
                                          • Prepare resources needed to produce  
                                          • Schedule production for maximum efficiency |
| **Production/Construction** | • Produce and deliver with excellent quality |

Figure 2d. Departmental Functions of the Technical Division
### Qualification Division

<table>
<thead>
<tr>
<th>Department</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testing and Validation</td>
<td>• Test and validate the product for quality/correctness</td>
</tr>
<tr>
<td></td>
<td>• Pass on the corrected product for review</td>
</tr>
<tr>
<td>Review and Feedback</td>
<td>• Review product to isolate any cause for unacceptable quality</td>
</tr>
<tr>
<td></td>
<td>• Review team actions and correct them if needed to achieve superior results</td>
</tr>
<tr>
<td></td>
<td>• Care for students so they are trained to become competent, contributing team members</td>
</tr>
<tr>
<td>Recognition and Awards</td>
<td>• Examine and evaluate reports, products, and team members</td>
</tr>
<tr>
<td></td>
<td>• Recognize and reward excellence in the quality</td>
</tr>
</tbody>
</table>

**Figure 2e. Departmental Functions of the Qualification Division**

### Public Division

<table>
<thead>
<tr>
<th>Department</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Relations</td>
<td>• Maintain excellent appearance of the team and its facilities</td>
</tr>
<tr>
<td></td>
<td>• Make team activities known to the public (students, community, industry, etc.)</td>
</tr>
<tr>
<td>Distributions</td>
<td>• Establish contacts with potential sponsors for future design practicum projects</td>
</tr>
<tr>
<td></td>
<td>• Deliver product(s) to the sponsor</td>
</tr>
<tr>
<td>Promotion</td>
<td>• Promote successes of the team among the public</td>
</tr>
</tbody>
</table>

**Figure 2f. Departmental Functions of the Public Division**
### AN EXAMPLE OF POST ASSIGNMENTS

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Assigned Posts</th>
</tr>
</thead>
</table>
| Faculty Coach   | • Capstone Program Officer  
                  • Sponsor Affairs Officer  
                  • Personnel Officer  
                  • Ethics and Inspection Officer  
                  • Income Officer  
                  • Recognition and Awards Officer |
| Sponsor         | • Review and Feedback Officer  |
| Student 1       | • Executive Officer/Director  
                  • Procurement/Preparation Officer  
                  • Analysis and Design-Section 1 In-Charge |
| Student 2       | • Communications Officer/Coordination Director  
                  • Records/Reports Officer  
                  • Analysis and Design-Sections 2 In-Charge |
| Student 3       | • Disbursement Officer/Finance Director  
                  • Inventory Officer  
                  • Production/Construction Officer |
| Student 4       | • Testing and Validation Officer  
                  • Analysis and Design Officer |
| Student 5       | • Public Relations Officer/Public Director  
                  • Distribution/Promotion Officer  
                  • Procurement/Preparation-Section 1 In-Charge  
                  • Production/Construction-Section 1 In-Charge |
RECORD KEEPING

Proper records are important to track the progress of the project, to clarify agreements reached, to retain information and knowledge gained, to transfer results to the sponsor, and to disseminate results to your colleagues or public at large.

**Project Notebook:** Each team member must acquire a page-numbered notebook (as specified by your instructor) to record important project developments. You should keep this notebook in your possession during all project related activities. This book carries the meeting minutes, thoughts, ideas, suggestions, comments, sources, sketches, data, test results, conclusions, etc. The project notebook would form the basis for any possible patent application.

Write in ink. Write legibly with enough details and clarity to be understandable. Use pages in sequences. Leave no blank pages to fill later. Paste or staple sheets of information, computer printouts, e-mails etc. List important phone numbers, addresses, etc. Record meeting minutes including date, location, time, and persons present, targets accomplished and planned, new facts and data, etc. During testing phase, record test conditions, procedure, and results obtained. The faculty advisor shall occasionally ask you to turn in your notebook for inspection.

**Project Folder:** Each team shall maintain a neatly kept folder in the Capstone Cafe (FH143) with hardcopies and electronic files of the following items as they become available.

- Strategic Plan/Team Organization
- Plan of Action
- A file containing Weekly Progress Reports (Group)
- Mid-Term Presentation
- Mid-Term Report
- Final Presentation
- Poster Display
- Final Report

**Project Records:** Each team shall maintain the following records.

- Files of correspondence with vendors, liaison, etc.
- A file of financial records including copies of purchase receipts
- Users’ or Instruction manual of equipment purchased
- Technical Specifications of purchased items
- Any other related information

**Vendor Catalogs:** Catalogs acquired during the project should be kept in the Capstone Cafe (FH143) for general use.

**Storage Space:** Lockers outside the Capstone Café may be used to store project related supplies, equipment, or materials. Contact AME receptionist for locker assignments.
MEETINGS AND CONFERENCES

During execution phase of Plan of Action, i.e., in Spring Semester, team meetings and conferences with faculty advisor and liaison are required.

- All members of each team must meet once a week to review progress during the past week and to make plans for the next week. During the meeting, specific targets must be assigned to or undertaken by each team member. The target must be finite and not a generality. It should consider “What exact actions do I have to do to carry out the strategic plan to achieve the exact results necessary for this stage of the strategic plan, within the limits of available resources?”

- The meeting discussion must be recorded, and a group progress report must be submitted to the faculty advisor by 11am on Thursday (or as instructed by your advisor) using the attached format (Progress Report – Group). Each team member must record his/her targets, and submit his/her weekly progress report to the instructor by 11am on Thursdays (or as instructed by your advisor) using the attached format (Progress Report – Individual).

- Each team will meet weekly at a regularly scheduled time with the faculty advisor to review progress, plans, and to seek advice. Additional meetings with the advisor may be arranged as necessary.

- The team must meet with the Project Liaison as necessary. At the minimum, a copy of the weekly Progress Report – Group should be submitted to the Project Liaison to maintain effective communication.

- The team members must meet regularly as needed to perform the project task.

- The mid-term and final presentations are combined for all sections. You are expected to attend all presentations to provide review and feedback.

- We invite guest lecturers to speak on various topics of professional interest such as business planning, entrepreneurship, intellectual property, patent laws, ethics, and engineering codes and standards. Attendance is mandatory at these meetings announced in advance.

- A poster fair is scheduled in the last week of classes.

- There are no regular lectures in this class, except as announced by the faculty advisor.
WEEKLY PROGRESS REPORT (GROUP)
SUGGESTED FORMAT

To:       Prof. ABC (Faculty Advisor)
Cc:      Mr. CDE (Technical Liaison)
From:   Communications Director, THEE Group (Team Company Name)
Date:   January 22, 2014
Sub:   Weekly Progress/Plan of Action

Targets Planned Last Week
List targets planned last week (copy the list from the previous week)

Targets Completed
List targets completed by the team during the week. Provide specific details supporting completion, e.g., part drawings, material list, test results, report prepared, discoveries made, etc. Provide attachments as necessary.

Targets Not Completed/Actions Needed to Ensure Future Success
List targets planned but not completed during the week. Identify sources or causes of obstruction, and explain how the team planning will be improved to avoid incomplete targets in the future.

Plan of Action for the Next Week
List targets planned for the coming week. Identify resources (time, money, people, facilities, software, hardware, etc) and coordination (within and outside the group) required. List the sequence of actions needed to accomplish the targets. Identify what will be produced at the end this effort. The weekly plan must align with the strategic plan and the overall plan of action. In developing this plan consider “what exact action do I have to do to carry out the strategic plan to achieve the exact results necessary for this stage of the strategic plan within limitations of available resources?

Approvals/Problems/Concerns/Achievements or Success
Submit requests for approval by the advisor or liaison. Explain any problems or concerns of any division (executive, coordination, financial, technical, etc) or department of the team. List important achievements or successes made.

2 A target must be finite and not a generality. It must be terminable, i.e. it can be done, finished, or completed. For example, “start calling suppliers” is not finishable. However, “call so-and-so and request product catalog for so-and-so to design so-and-so” can be completed. The target must accomplish a desirable part of the overall strategic plan to reach the project goal.
WEEKLY PROGRESS REPORT (INDIVIDUAL)
SUGGESTED FORMAT

To: Prof. ABC (Faculty Advisor)
From: Your Name/Your Team
Date: January 29, 2014
Sub: Weekly Progress/plans

Targets Planned Last Week
List targets planned last week (copy the list from the previous week)

Targets\(^3\) Completed
List targets completed by you during the past week. Provide specific details supporting completion, e.g., part drawings, material list, test results, report prepared, discoveries made, etc. Include attachments as necessary.

Targets Not Completed/Actions Needed to Impede Incomplete Targets in the Future
List major targets planned but not completed during the week. Identify sources or causes of obstruction, and explain how you would improve your future planning to overcome them.

Plan of Action for the Next Week
List targets planned for the coming week. Identify the time and resources required by you, and how you will coordinate with other members of your team. List the sequence of actions needed to accomplish the major targets. Identify the end product(s) of your efforts. The weekly individual plan must align with the weekly group plan. The group plan should support the strategic plan and the overall plan of action.

Problems or Concerns/Achievements or Success
Explain problems or concerns of your own division or department. List your achievements and successes.

\(^3\) A target must be finite and not a generality. It must be terminable, i.e., it can be done, finished, or completed. For example, “start calling suppliers” is not finishable. However, “call so-and-so and request product catalog for so-and-so to design so-and-so” can be completed. The target must accomplish a desirable part of the overall strategic plan to reach the project goal.
INSTRUCTIONS FOR ORAL PRESENTATIONS

A mid-term and a final oral presentation are required. These are professional-level presentations, appropriate to the audience comprising of your colleagues, faculty, sponsors, technical liaison, and guests. The presentation should include power point slides and, if possible, operating demonstrations. You should allow time for a question-and-answer session at the end of your presentation. A total of approximately 30-minutes are allocated for each team. The presentation schedule will be announced in advance. Two concurrent sessions will be held. You may switch between sessions only during the designated times.

A laptop and a computer projector will be available in the presentation room. To avoid technique interruptions and delays, you MUST submit and test your presentation in advance (typically in the morning of the presentation day) in the instructors’ office as announced. **Use of e-mail to submit your presentation is discouraged.**

Faculty member(s) (other than the instructor) designated for each team will conduct a thorough evaluation of the team. In addition, each member of the audience including faculty, fellow students, and sponsors shall evaluate each presentation. Thus, you will evaluate each team in the sessions you will attend. Please print one copy of the Design Evaluation Form for each team, complete it, and turn it in to your faculty advisor after the presentations.

**Suggested Guidelines**

1) All team members should participate in the presentation.
2) Dress nicely. No shorts, jeans, or hats.
3) The quality of slides counts. Use large font for text, clear graphics, and smart color combinations for superior visual impact.
4) Divide topics among team members, and avoid repetition.
5) Do not assume that the audience knows about your project.
6) Prepare notes, but do not read them verbatim.
7) Be aware of the lighting. Avoid speaking in the dark.
8) Face the audience while speaking.
9) Speak so that audience at the back of the room can understand.
10) If you goof while talking, correct yourself and continue.
11) Rehearse your presentation (with a friendly critic), and ensure that it is within the time limit.
12) Allow time for question and answer as part of your presentation.
PROJECT PRESENTATION
SUGGESTED FORMAT

• Project Title, team name, sponsor, liaison, faculty advisor

• Project Goal/Purposes

• End Products/Deliverables Required

• Strategic Plan

• Organizational Structure

• Project Status
  o Major Tasks (Completed)
  o Schedule (and Remaining Tasks)

• Financial Statement
  o Expense Report
  o Acquisitions and Assets

• Technical Approach (Largest section of the presentation)*
  o Functional Requirements
  o Concept Generation and Selection
  o Analysis and Design of Subsystems
  o Proof-of-Concept Hardware
  o Testing, Correction, and Qualifications Procedures/Results
  o Final Prototype and Documentation

• Potential Impact of the Project (as applicable)
  o Engineering Community
  o Business Enterprise
  o Society at large

• Acknowledgements (as applicable)

• Questions/Answers Session

* Mid-Term Presentations must devote a greater amount of time on Technical Approach.
FINAL REPORT

Cover Letter: Addressed to sponsor and introducing the plan of action, original signature of the team communicator

Cover Page: project title, submitted to, submitted by XYZ Corporation, and date.

Signature page: typewritten names and original signature of each team member.

Executive Summary: Summarize the project emphasizing important accomplishments.

Table of Contents

Goals: Provide the statement of goal or purposes achieved.

Introduction/Background: Introduce the problem, provide background information, and explain the need to solve it.

Desired End Product: Identify the nature and function of the end product desired.

Design Requirements: List detailed design and function requirements and specifications.

Technical Approach: Describe overall approach for the problem. Describe steps used and the outcome. Provide recommendations for future work.

Schedule: Identify duration of each major task using the Gantt chart

Budget Statement: List items purchased and cost.

Facilities and Resources: Identify/list facilities and resources used.

Team Organization: List team structure and posts taken by each team member. Describe duties of each post taken by a team member (List what changes/additions you would make on the experience gained during this project).

References (Users’ Manuals, detailed specifications, calculations, suppliers etc)

Appendices (as needed)
DISPLAY/POSTER FAIR

Poster sessions are commonly used at professional and scientific meetings. They provide an effective way to communicate your results to a large number of people. In contrast, visitor to the Final Design Presentations would normally attend a limited number of presentations. Poster sessions allow greater interaction between teams and visitors, and allow an opportunity to display the prototype designed and/or built. A visitor may spend more time with a particular team, depending upon his/her interest.

The display/poster fair shall be held either in front of Felgar Hall or in between Felgar Hall and Carson Engineering Building in the last week of classes (the rain location will be the 1st floor of Felgar Hall). Two aspects are involved: a poster to show your work by text/photographs and a physical display of the product (if applicable). Each team shall be provided with one table and two chairs to setup their display/poster. Consider how you will secure the poster in case it is windy outdoors. Consider the set up time in your planning so that your display/poster is ready for viewing by public at/before specified time. Although we plan to advertise the event, please feel free to invite your family, friends and colleagues to showcase your work.

A panel of judges from outside the University of Oklahoma shall evaluate your display/poster. Our judges are senior engineering personnel from various companies and organizations. We plan to recognize excellence in Design Practicum Projects through awards as explained separately.

Dress business casual. Team members to answer questions from judges or audience must attend the poster/display booth. Each team member is however not required to be present at the booth at any given time. Thus, you should rotate responsibilities to ensure that at least one team member is present at the booth during the poster fair. Good oral communication in explaining your project to judges is extremely important. You are responsible to remove all items from the booth at the end of the fair, and to ensure that the grounds are left in good condition.

Suggested Guidelines:
- Show the actual product or component that you designed/built. Use video display or computer demonstrations if you are unable to transport your product to the display booth. You must arrange for your own display equipment.
- You will be emailed a Power Point template (with appropriate size) to prepare the poster. Use a large font so the reader can view your poster from some distance.
- Keep the text to the minimum and emphasize the main ideas that you want to convey. The reader can ask you questions if more details are needed.
- Use photographs, figures, and graphs to make your poster visually pleasing. Make effective use of color and contrast.
• You will be provided with additional instructions on deadlines for submitting the poster for printing.

2-PAGE POWERPOINT SUMMARY FORMAT

Prior to the Poster Fair, each team will prepare a 2-page PowerPoint summary of their project. After the team's faculty advisor has reviewed and approved the file, send it by e-mail to Dr. Siddique (zsiddique@ou.edu). Additional instructions will be provided later. Your 2-Page descriptions will be used to produce a summary display for the Poster Fair.

Overall background and style is determined by the team. However, the use of color and pictures is encouraged.

The first page or slide should include at least:
1. The name of the project
2. The objective of the project
3. The names of the team members
4. A team photo
5. The name of the sponsoring agency
6. The name of the sponsor’s liaison
7. The name of the faculty advisor

The second page or slide should include at least:
1. Summary statement(s) addressing how the problem was resolved.
2. More pictures!
# PEER EVALUATION FORM

**Name of the Team Being Evaluated:** ____________________  **Date:** ________

**Purpose:** Evaluate each team member including yourself using this form. Submit this form electronically to the instructor after each major step (plan of action/mid-term/final presentations). The instructor will share this input with your team to provide constructive feedback. It is to your advantage to assist your teammates since the team cannot perform unless each member makes it do so. Thus, help your teammates to the best of your ability. If you see a person not doing his/her job or doing it poorly, give him/her some suggestions to look over.

<table>
<thead>
<tr>
<th>Rating Scale:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>NA</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Unacceptable</td>
<td>Poor</td>
<td>Acceptable</td>
<td>Good</td>
<td>Excellent</td>
<td></td>
</tr>
</tbody>
</table>

**Last Name (in alphabetical order):**

<table>
<thead>
<tr>
<th>Contribution towards team planning</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution of tasks undertaken/assigned</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understanding of team organization/personal duties</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Communication and timeliness</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Professional and ethical responsibility</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Report writing and record keeping</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Application of knowledge to achieve the design goals</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiative and innovation</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Quality of work performed</td>
<td></td>
<td></td>
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<tr>
<td>Orderliness of work area and/or tasks performed</td>
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<tr>
<td>What changes are necessary to improve the performance? (use additional space as necessary)</td>
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<tr>
<td>What changes are desirable to improve the performance? (use additional space as necessary)</td>
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</tbody>
</table>

Please write your name on the back of this form if submitting a paper copy.
# FINAL/MID-TERM DESIGN PRESENTATIONS EVALUATION FORM
(SAMPLE)

**Your Name** (required): [Insert Name]

(Circle one) Sponsor/Liaison, AME 4553 Student, Faculty Member, TA, Guest, Other

**Name of Project Evaluated:**

Advisor of Project (Circle one): Altan, Siddique, Song, Stalford

Day Project Presented (Circle one): April 26, 2011; April 28, 2011

Time Project Presented (Circle one): 1:30 – 2:00; 2:00-2:30; 2:30 – 3:00; 3:00 – 3:30; 3:30-4:00, 4:00-5:00

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**Final Design Presentations Evaluation Form**

Note: Please evaluate teams as if they were industry professionals. Provide your written comments to help the team achieve their goal of developing a superior end-product.

<table>
<thead>
<tr>
<th>Rating Scale:</th>
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</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Score 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Overall, the presentation was well prepared and professionally presented. (consider the quality of visuals, participation of all, length of presentation, oral communication, etc.)</td>
<td></td>
</tr>
<tr>
<td>2 The project description and technical approach were clear to the audience. (consider continuity and clarity in describing the technical details)</td>
<td></td>
</tr>
<tr>
<td>3 The team applied appropriate techniques, skills, and modern engineering tools in generating concepts.</td>
<td></td>
</tr>
<tr>
<td>4 The team applied appropriate techniques, skills, and modern engineering tools in performing analysis and design.</td>
<td></td>
</tr>
<tr>
<td>5 The team applied appropriate techniques, skills, and modern engineering tools in producing hardware.</td>
<td></td>
</tr>
<tr>
<td>6 The team demonstrated critical thinking skills, initiatives, and innovation. (consider cleverness of solutions, ideas, products, and impact on business/society)</td>
<td></td>
</tr>
<tr>
<td>7 The team demonstrated adequate progress within budget limitations. (consider schedule, tasks completed and remaining, budget status)</td>
<td></td>
</tr>
<tr>
<td>8 The team demonstrated ability to function as a group. (consider organizational structure, contributions of individuals, multidisciplinary approach used)</td>
<td></td>
</tr>
<tr>
<td>9 The presentation stimulated participation by the audience. (consider the question and answer session)</td>
<td></td>
</tr>
</tbody>
</table>

Total Score

**Comments:** Discuss your overall impression of the presentation, and provide your recommendations on how the team might improve (a) the presentation, and (b) the methodologies used in this project.
**Poster/Display Fair – Sample of Judges’ Scoring Sheets**

Name of Judge: ___________________________________________________________

Poster/Display Fair Evaluation Form

<table>
<thead>
<tr>
<th>Rating Scale:</th>
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<td>Unacceptable</td>
<td>Poor</td>
<td>Acceptable</td>
<td>Good</td>
<td>Excellent</td>
<td>These questions are given as guidelines ONLY.</td>
</tr>
</tbody>
</table>

**Question 1.** Overall, the poster/display was well prepared and professionally displayed.
(consider the quality of visuals, oral communication, etc.)

**Question 2.** The project details and technical approach were clearly presented.
(consider continuity and clarity in describing the technical details)

**Questions 3** The team applied appropriate techniques, skills, and modern engineering tools.
(consider concepts generated)

**Questions 4** The team applied appropriate techniques, skills, and modern engineering tools.
(consider analysis and design performed)

**Questions 5** The team applied appropriate techniques, skills, and modern engineering tools.
(consider solutions and deliverables provided to the sponsors or users)

**Question 6.** The project demonstrated critical thinking skills, initiatives, and innovation.
(consider cleverness of solutions, ideas, products, and impact on business/society)

**Question 7.** The project demonstrated satisfactory accomplishment within budget limitations.
(consider schedule, tasks completed and remaining, budget status)

**Question 8.** The project demonstrated quality in performing tasks.
(consider the quality of the design and product)

**Question 9.** The project demonstrated team efforts and team coordination.

**Question 10.** The presentation stimulated interest and participation by the audience.
(consider the discussion session)
POLICIES AND PROCEDURES
CAPSTONE CAFÉ

Each person is responsible to ensure that all policies are carried out to ensure consistent and coordinated efforts to support the program goals.

Capstone Café

Located in FH 143, the Capstone Café has computer work stations for project research, design simulation and analysis. Access to the room is controlled by a security system that is integrated with the OU OneCard Office. The card swipe security system records the date, time and identity of each OU ID card used to enter the room.

Each capstone instructor should request access for their student teams by providing a list of student names and ID numbers to the Assistant to the Director, with a copy to the Capstone Coordinator. Arrangements will be made with the OneCard Office for the students to be added to the Capstone Café card swipe system. Only students enrolled in a section of AME 4553, Design Practicum, will be allowed access.

Each person receiving entry privileges to the Capstone Café is responsible to see that all policies are carried out and that consistent and coordinated efforts are made to support the program goals.

- Absolutely no food or drink items are allowed in the Capstone Café.

- Project sponsors or other external visitors may visit this area from time to time. Keep the desks, shelves, work area, etc., neat, orderly, and operational. See that papers are not scattered around.

- Limit your computer usage to capstone projects only (example: no checking e-mail or working on homework for other courses). One computer will be designated for running simulation projects that require extended computational time. This computer will be available for the team working on that project and will be password protected.

- All users of the Capstone Café should keep watch over the equipment, upkeep and security features of the facility (example: no propping the door open or opening for others). Any out-of-the-ordinary conditions should be reported immediately to the AME Office and the Capstone Coordinator.

- Abuse or violation of these policies may result in revoked entry privileges

Lockers

The Capstone Café will no longer serve as a storage facility for a team’s supplies, equipment, project prototype, etc. Lockers are available by making arrangements with Billy Mays in the machine shop. A key to the team’s locker can be checked out through the AME Office (Vicki Pollock) after Vicki has received approval from Billy.
SAFETY IN MACHINE SHOP/ CAPSTONE STUDENT SUPPORT LABORATORY/ LABORATORIES

Safety is everyone's business. Prudent safety practices require that the involved individual recognize that (i) known hazards need to be eliminated, (ii) potential hazards should be thoroughly investigated, and (iii) protection against known and potential hazards should be a way of life.

Although the university strives to provide safe equipment and a safe environment, safety ultimately falls upon the person who works in the lab. That person must be constantly aware of his/her responsibility to himself/herself as well as to the university in order that the chance of serious injury, loss of life, or damage to equipment is minimized. The individual should constantly watch out for potential hazards, know the recommended operational procedures, if in doubt consult the responsible person such as the technician or a faculty member before operating the equipment. Report the potential of known hazards to the proper authorities and take all necessary precautions. The following is a list of guidelines that should be followed by the persons working in the AME laboratories. However, the individual should not construe that his/her responsibilities are limited to this list proper behavior is a must in the AME machine shop, Capstone Student Support Laboratory and other Laboratories.

General Guidelines

1. Persons in charge of labs\shop should make available a copy of these guidelines to individuals working in their labs. Individuals who fail to follow these guidelines may be removed from the lab and/or may lose their privileges to use AME laboratories.

2. Individuals should familiarize themselves with fire exits in the lab and the locations and use of fire extinguishers and first aid equipment

3. Individuals should use protective equipment (e.g., gloves, masks, and eye protection wear, and ear protection) wherever recommended. Open top shoes (e.g., sandals, thongs, etc.) will not be permitted in the shop to prevent foot injury.

4. When working on experiments in a lab/shop, there must be at least two people within reachable or communicable distance from each other. Exemptions may be granted by the person-in-charge of the lab for certain types of work which are commonly recognized as safe.

5. Equipment should not be disconnected from existing installations without the approval of the individual concerned.

6. Equipment should not be borrowed from any lab/shop only following the procedures set by the person-in-charge of that lab.

7. Smoking is not allowed in any area of Machine Shop or Felgar Hall.

8. Eye protection to be worn in the AME shop at all times

9. No gloves to worn while using rotating equipment
10. Safety and operation of equipment training will be done by shop personnel at different times during the semester/year. Shop personnel will set and announce the training times.

Safety rules have been developed for specific items in the machine shop/lab including:

- Grinders
- Respirators
- Lathes, Drill Presses
- Electrical Systems
- Heating Protection
- Chemical and Flammable Liquid Storage
- Housekeeping
- Welding Equipment/Cutting Torches
- Drill Presses
- Saws

Please contact Billy Mays in AME Machine Shop for additional safety guidelines if your project involves any of the items.

---

**SAFETY TRAINING**

**A. GENERAL**

Individuals training in job responsibilities and job operations, proper methods and techniques to be used, and the hazards associated with the function or systems are the most important elements in achieving safe operations. Technicians will be responsible to assure all newly assigned individuals receive adequate training before beginning to work.

Formal training is required for all individuals engaged in hazardous operations such as high voltage work and operating machinery.

**B. ON THE-JOB TRAINING**

On-the-job training will be accomplished by supervisors and foremen responsible for the individual. This training will include:

- University safety program.
- Prescribed safe clothing and equipment for the job.
- Emergency treatment of injuries.
- How to report a fire or serious injury and accident
- Specific hazards associated with the job.
- General hazards encountered in the work area and how to avoid them.

If an employee demonstrates, through accidents or continued unsafe acts, that he/she does not understand the safety requirements of his/her job, the individual will be re-trained by...
formal training programs, repeat on-the-job instructions, or be personally counseled by a supervisor.

C. ENVIRONMENTAL HEALTH
The safety officer or safety coordinator will maintain close attention with environmental health activities to coordinate company requirements for those: functions falling within their control. There is a relationship between accident prevention and occupational health. For example, some industrial chemicals present a variety of serious hazards to health and property when improperly handled. That is, depending on conditions, the vapor from a chemical can ignite or explode; it can cause dizziness or death when inhaled, or dermatitis when touched. The Safety coordinator and the local health department will cooperate in their efforts to ensure the success of the safety Program and to minimize occupational health and safety hazards.

D. FIRE SAFETY
There Are Four Classification, of fire:

CLASS A: Natural Materials - Ordinary fires of paper stock, wooden skids, or textiles. These fires require cooling. Quenching. Or smothering. and can be put out by water.

CLASS B: Flammable of Combustible Liquids Such as alcohol, printing ink, or solvents - may catch fire. These fires must be smothered or blanketed. Water can make them worse. These fires are very Dangerous. Soiled oil rags can burst into flames from spontaneous combustion. They should be kept in metal containers with spring lids.

CLASS C: Electrical- The substance: burning in electrically energized. Equipment may be paper, but using water can cause electrocution if the current is on; water conducts electricity. These fires require a no conducting extinguishing agent; unless you are absolutely sure the current is off

CLASS D: Metals - Combustible metals, such as magnesium, titanium, etc., are used in the printing industry. Class D fire extinguishers are available, but these fires and Class C fires probably need the attention Of the fire department.

Portable Fire Extinguishers

Fire extinguishers are only effective for small fires ill the early stages. Only properly trained employees should use fire extinguishers:

- Just as there are different kinds of fire, there are different kinds of fire extinguishers. Using the wrong kind may cause more damage than good, and may even cause the fire to spread.

- All fire extinguishers at AME are B or C.
FIRE EMERGENCY PROCEDURES

UPON OBSERVING A FIRE
1. Call911.
2. Call a supervisor.
3. Station a person on street adjacent to facility to direct Fire Department personnel to the area.
4. Assess seriousness of fire.

IN CASE OF MINOR FIRE:
5. Fight fire IF IT CAN BE DONE SAFELY. (In the meantime, Supervisor calls the Fire Department)
6. Cooperate with the Fire Department

IN CASE OF MAJOR FIRE
7. Leave fire area. CLOSE DOOR BEHIND YOU. (Set off fire alarm)
9. Cooperate with the Fire Department
10. Individuals should meet in parking lot
11. Supervisor is responsible for the head count

EMERGENCY PROCEDURES CHECKLIST

CALL911. GIVE CLEAR, ACCURATE DIRECTIONS.

ASSIGN A COMPETENT PERSON TO MEET AMBULANCE AT ENTRANCE.

RESTRICT THE IMMEDIATE AREA OF THE ACCIDENT SCENE TO AUTHORIZED PERSONNEL ONLY.

IF FURTHER DANGER EXISTS, CLEAR AREA.

Other Emergency and Important Phone Numbers
- GODDARD HEALTH CENTER PHONE 325-4611
- OU POUCHE DEPARTMENT PHONE 325-2864
- OU PHYSICAL PLANT PHONE 325-3060
- OKLAHOMA POISON CONTROL PHONE 271-5454
- AME CONTACT: DR. ALTAN PHONE 325-1737
  BILLY MAYS HOME PHONE 364-2096
PURCHASING PROCEDURE FOR STUDENTS
MEMO FROM DEBBIE MATTAX

To: Capstone Students and Instructors
From: Debbie Mattax
Financial Associate I

AME Capstone Students and Instructors,

I thought it would make it easier with the changes in the Capstone Program this year to put in writing the updated purchasing procedures and some tips learned from past experience. I hope this will help to make things run smoothly if you can share these procedures with your students.

Steps to ordering materials for Projects in AME.

To be compliant with University procedures we need to use the following guidelines when purchasing materials, equipment, or supplies for the Capstone projects. To purchase items with the University discount and tax exemption, it is best to order through Debbie or Vicki, using our University credit card. The Department has an AME PCard form (included in this Handbook) which needs to be signed by the Capstone Instructor before placing orders, then we can order online, or by phone, in the AME office. Most of you are familiar with these forms but many students are not.

We are now able to purchase items from many companies online without using a Purchase Order (PO), so have your students check first before getting a PO, it may not be necessary.

We have many accounts set up for online ordering, so if students are calling for information from their company of choice, they can ask if the University of OK has an account set up under name Debbie Mattax, or University of Oklahoma/AME. Some companies, like McMaster Carr, allows you to select your shopping cart and email it to the purchaser (Debbie- dmattax@ou.edu) to be placed directly. I do need to have the AME Pcard paperwork signed by the Capstone Instructor before I can place the order.

Some companies still do not accept credit card payments. For students to obtain a Purchase Order, see Vicki Pollock in AME 212. They will need the Capstone project name, Instructors name, store name and estimated cost. They will take the PO form to the store, making sure the clerk does not charge tax on the purchase. Please return the invoice to Vicki as quickly as possible for payment.

Lowes, Hobby Lobby and Home Depot no longer take PO’s. If you purchase items from Hobby Lobby, you will need to write in the items because they do not print out descriptions on the payment slip and it is required to be itemized. Check with Billy or Greg in the AME shop and they can also assist with purchases. You will need your Pcard form filled out and signed by the sponsor in order for them to help you.
The AME shop (ie: Billy and Greg) plan to pick up materials on Tuesday and Thursday/Friday, depending on the workload, from local businesses for the Capstone Teams. Teams are asked to have at least 1 student representative to meet them at the store, to help pull the materials needed for the project with the AME PCard approval form completely filled out and signed by the instructor. (The form must be in hand to purchase the items for Billy or Greg to collect) This has worked very well the last couple of years so we will continue to make purchases this way.

Poster printing for the Capstone Fair should be proof-read by several team members and approved by the Capstone Instructor, to make sure there are no errors, before submitting to be printed. All posters will be printed by the AME office, using OU’s Printing Services. Planning ahead for the Capstone Fair will save much worry and stress. Printing Services does an excellent job and has a quick turnaround.

Regarding reimbursements, if students must purchase something out of pocket for the project, I would recommend having one person in each group handle the purchases, if at all possible. By making a materials list from the beginning of the planning stages, it will reduce last minute rushing around to find a certain part. Some items have taken 6 weeks or more, to obtain, so it is very important to order early if you have special need items.

Reimbursements should be turned in as quickly as possible by students. There is now a 120 limit to reimbursements so if you turn it in after that, you will not get funds. There are reimbursement forms on Vicki Pollock’s desk to fill out completely and return. We have a huge backlog at the end of April due to all the students waiting to turn in these expenses at the last minute. We further encourage you to order thru the office whenever possible, to alleviate the necessity of reimbursements.

Another note to pass on to students if items are purchased from Hobby Lobby. They will need to write in the description of items because they do not print out on the payment slip and the reimbursement will not be paid until details are provided, delaying payment. We further encourage your students to order thru the office whenever possible, to alleviate the necessity of reimbursements and to receive the University tax exemption.

Thank you,

Debbie Mattax
**Request for Purchase on AME PCard**

*All standard small dollar restrictions apply. American Express is the card*

Date Requested:___________  Acct.#: _______________
Detail: _______________
Student Name: _______________________________________________________
Email Address:_____________________________ Phone:_____________________
Faculty/Staff Request & Approval:_____________________________________
Ordered by:______________________________  Date:_____________________
Vendor: ______________________________________________________________
Phone: _________________________________ (for phone orders)
Web site: ________________________________(for internet orders)

Shipping details: _Overnight  _Standard Ground  __Other____________________

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<th>Description</th>
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Total Purchase

Attach list if more items are needed.
Submit to Debbie Mattax when completed. 325-5012 or dmattax@ou.edu

**COMPUTERS CANNOT BE ORDERED USING THE P-CARD.**

PO#______________________________  Paid by PCARD___________________________

PURCHASE CANNOT EXCEED $5,000.00