SAN JOSÉ STATE UNIVERSITY
Mechanical and Aerospace Engineering Department

ME 110 - Class Presentation Guidelines Fall 2000

Introduction

One of this semester's major assignments is for you to research and make a presentation to the class about a manufacturing process. The goals of this assignment are to help you learn more about manufacturing processes, help you gain experience in carrying out research, and give you practice making a technical presentation and writing a report.

You will carry out the work for this assignment with a partner from the class. You will select the manufacturing process and presentation time slot from a list that will be posted on Prof. Furman's office door. You may choose your partner provided that both your names are recorded on the list before September 11, 2000. After that date, I will assign the pairing among the people remaining.

Grading Criteria

Grading of the presentation will be carried out using the following criteria:

- **Presentation of Content** (30%) Your presentation will be judged on the clarity and completeness of what you covered according to the content guidelines listed below.
- **Effectiveness of the Presentation** (20%) Your presentation will be judged on how well the content was presented. The focus here will be on the effectiveness of the audio-visual and active learning aspects of your presentation. For example, if you used overhead transparencies, how clear were they? Were there any typos? How clearly and loudly did you speak? How effective was the active learning element of your presentation? Etc.
- **Quality of the Report** (30%) This aspect focuses on the completeness and quality of your written report. How well does your written report explain the manufacturing process you were assigned? How clear is it? How well is it documented and referenced?
- **Individual Contribution** (20%) This aspect will address the quality of each group member's contribution to the outcome of the assignment.

Content Guidelines

Your presentation must contain the following elements:

- Title slide
  The title slide should have the process name, presenters' names, course title, date of presentation, etc.
- Description of the process
  This should include clear figures, pictures, illustrations, etc. that depict the major elements and operating principles of the process.
- Description of the kinds of parts produced by the process
  This should include clear figures, pictures, illustrations, video footage, etc. that show what kind of parts the process produces. One very effective way to do this is to have actual parts that you can pass around to the class. Many manufacturers and equipment manufacturers will be happy to give you free samples of parts if you ask them. Try to emphasize the range of parts that are produced with the process. Remember, the purpose of the assignment is to give a good overview of the process to your classmates.

- Description of the capabilities of the process
  The idea here is to address at least the following items:
  - Materials with which this process can be used
  - Typical tolerances that can be maintained on parts produced by this process
  - Typical surface finish that this process can produce
  - Typical rates of production, e.g., parts/min, in/min, etc. (Note: this may need some judgement on your part to identify the appropriate measure of production rate. See your instructor if this is not readily obvious for your process.)
- References slide
  This slide should list the sources of your information

Presentation Guidelines

Plan for your presentation to last about 10-15 minutes, leaving about 5 minutes for questions, discussion and an active learning exercise. What is an active learning exercise? An active learning exercise is something that gets your audience *doing things and thinking about what they are doing*[1]. This is in contrast to passive learning, which you are familiar with from most lecture courses, i.e., where the instructor speaks or writes on the board, and the students just sit, listen, and take notes. What can you do to promote active learning? The possibilities are only limited by your creativity. Here are a few ideas to start your thinking:

1. Have people generate a list of products or parts they have come across before that have involved the manufacturing process you presented. This could be done in a small group.
2. Make up a short quiz that asks questions about what you covered in the presentation.
3. Have people write a minute-paper on what they are unclear about or would like to know more about from what you just presented.
4. Make up a game or contest that requires the audience to do something with the ideas or facts that you presented.

The active learning exercise should only last a few minutes, so you will need to have your act together and execute it efficiently.

If you use overhead slides, the rule-of-thumb is about 1-2 minutes per slide. So for a 15-minute presentation, you will probably have about 8-10 slides.

Make sure that your text and illustrations are ***clearly visible*** to people in the back row. Any text should be at least 18 point (preferably 24 point or larger). Drawings should use line weights of at least 1 pt. If you use PowerPoint, and would like to make handouts of your slides for the audience, your instructor can make copies of them for the class if you submit them at least two days before your presentation.

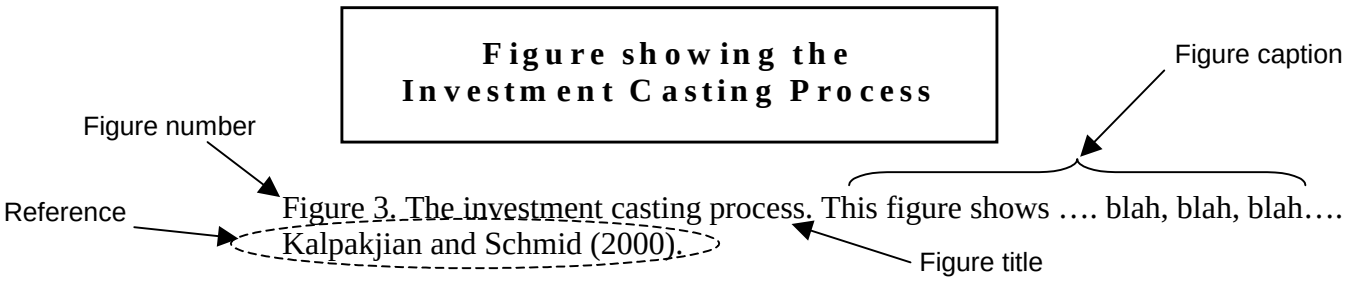
Presentation Report

Your presentation report is due two weeks after your presentation. The main body of your report should contain what you presented in class but in written form. You can use the same figures, graphs, etc., but tie it all together with clear prose. Include a list of references and/or bibliography. What is the difference between a list of references and a bibliography? Any material that you cite *directly* in your report, i.e., an exact quotation, a figure, graph, picture, etc. must be noted ***at the point it is used in the report,*** and then a complete citation of the source must be included in the list of references. A bibliography is usually a list of resources that you consulted in the process of your research but did not use directly in your report. Sometimes the words are used interchangeably. A common mistake made by many students is to copy verbatim large sections of text and/or figures without citation. This is called *plagiarism*. Plagiarism is

unethical at best and unlawful at worst. Avoid plagiarism by citing the reference of any material in your report that did not originate with you.

There are two common ways of noting the material and listing it in the list of references:

1. Use a superscripted numeral to note the material, and then list the references in ascending order in the list of references. (See the example above in the section on Presentation Guidelines.)
2. Use the author's name(s) and date of publication to note the material, and then list the full citation by last name(s) and date of publication alphabetically in the list of references. For example, suppose you use a figure from the textbook. (By the way, **all** figures need a figure number, a title, and a caption as shown below.) Here is what it should look like:



The list of references would then contain the full citation:

> Kalpakjian, S. and Schmid, S. R., (2000) *Manufacturing Engineering and Technology*, Prentice-Hall, New Jersey.

You must include at least one appendix that contains a verbatim hardcopy of the materials used in your presentation, i.e., your slides, etc.

Notes on the assignment:

1. Get started NOW! If you procrastinate, it will show in your presentation… and your grade!
2. The date of your presentation is firm. No changes, substitutions, delays, etc. will be granted.

A Suggested Process for Putting the Presentation Together

1. Choose a partner and a manufacturing process, and sign up on Prof. Furman's list
2. Set up a regular meeting time that you will keep in touch with your partner to develop your presentation
3. Get familiar with the process yourself! Here are some ways to go about this:
   a. Read the sections in the text on your process.
   b. Look at some of the references listed at the end of the chapters in the text.
   c. Consult other texts on manufacturing processes, e.g., the books on reserve in the Library, etc.
   d. Search for information about your process on the Internet
   e. Ask one of the reference librarians in Clark Library for sources of information
   f. Contact manufacturers of equipment used in your manufacturing process for information, literature, samples of parts, etc. This is highly recommended! You can find the contact information for most US manufacturers in the Thomas Register. This is a tremendously useful reference and is available in hard copy form in the reference section of the Library (look for the 4

ft. long shelf of big, green books) or online. See http://www.thomasregister.com/

4. Develop an outline of the main points to be covered in your presentation. Use the Content Guidelines as a start. Keep asking yourself, "What are the most important concepts, facts, and information that should be presented in 20 minutes to help someone who knows nothing about this process get a good overview of what it is, how it is applied, and what its capabilities are?"
5. Fill in the outline with subpoints and supporting information
6. Select the figures you will need to illustrate the main points and subpoints. Note: this is a key step, because, as the saying goes, "a picture is worth a thousand words." It is extremely important in engineering presentations, because much of what engineers deal with can really only be communicated succinctly and effectively with the aid of a figure, graph, equation, video, or physical example.
7. Put your "slides" together.
8. Practice your presentation. Try to get some feedback from someone other than your partner

Presentation Guidelines

Key Dates	Deliverables
9-11-00	Deadline for signing up on Prof. Furman's list for the topic of your presentation. If you have selected a partner to work with on the presentation, both names must be entered on Prof. Furman's list. After this date, Prof. Furman will make the pairing and select your topic for you. [Note: A 10% grade bonus will be given to those teams who sign up for the presentations on 10/2 and 10/4.]
9/18/00	Detailed outline containing main points, subpoints and supporting material. The more complete, the better your grade. Submit at the beginning of class.
10-2 to 11-13/00	Presentation. Date of your presentation depends on the date you selected from the list on Prof. Furman's door.
2 weeks after your presentation	Presentation report

References

1. Bonwell, C. C. and Eison, J. A., "Active Learning: Creating Excitement in the Classroom," ASHE-ERIC Higher Education Report No. 1. Washington, D.C.: The George Washington University, School of Education and Human Development, 1991.