

Notes on 16.621 Grading

16.621

Topics

- Grading rubrics for written proposals
 - Content
 - Communication
- Grading distribution between content and communication
- Dealing with multiple graders
- Division of work within teams

16.621 Written Proposal Content Grading Sheet - Spring 2003

Performance Level (see reverse side for definitions)				1	2	3	4	5	Comments
Version	I	II	III						
Cover Page	4	4	4						
Executive Summary			4						
Introduction	4	4	4						
Hypothesis, Objective, Success Criteria	4	4	4						
Literature Review		4	4						
Technical Approach		4	4						
Experimental Design			4						
Data Analysis			4						
Project Planning			4						
Facilities			4						
Summary			4						
References		4	4						
Appendices		4	4						
Overall Evaluation of Proposal Version									
Numerical Range				0-50	51-69	70-79	80-89	90-100	

Student: _____

Version: _____

Grader: _____

Grade: _____ /100

Performance Levels*

- | | |
|-------------------------------|--|
| 5 Exceptionally good | Coverage and/or correctness of content demonstrates superior understanding of the subject matter, a foundation of extensive knowledge, an ability to skillfully use concepts, and a well-organized and in-depth plan for a 16.62X project. The student is exceptionally well prepared to proceed to 16.622. |
| 4 Good performance | Coverage and/or correctness of content demonstrates a good understanding of the subject matter, capability for use of the relevant concepts, and a good plan for a 16.62X project. The section or version can be improved as indicated by comments in the text. The student is prepared to proceed to 16.622. |
| 3 Adequate | Coverage and/or correctness of content demonstrates adequate understanding of the relevant material, an ability to apply the concepts in a relatively simple manner, and a basic plan for a 16.62X project. The section or version can be improved as indicated by comments in the text. The student has the minimum preparation to proceed to 16.622. |
| 2 Minimally acceptable | Coverage and/or correctness of content demonstrates only partial familiarity with the subject matter, some capacity to work with the concepts in simple applications, and a partial plan for a 16.62X project. Deficiencies are serious enough that the student should make major revisions to this section/version by the next version, or <u>before</u> proceeding 16.622. |
| 1 Unacceptable | Content is missing, so incomplete, or so full of errors that it does not satisfy minimum requirements of acceptability. The student should completely redo this section/version by the next version, or is not prepared to continue to the 16.622 without repeating 16.621. |

* These performance levels are paraphrased from the definition of MIT grades given in the Bulletin

16.621 Written Communication Grading Sheet - Spring 2003

Performance Level (see reverse side for definitions)	1	2	3	4	5	Comments
Element						
Document preparation						
Cover sheet with appropriate information						
All required sections and sub-sections present and properly labeled.						
Page numbers; tables, figures, and equations labeled						
Acronyms and numbers used conventionally						
Citations done properly (when appropriate)						
Writing skills						
Ideas flow logically from sentence to sentences, from paragraph to paragraph, from section to section						
Document shows evidence that writer has considered a mixed audience and provided sufficient background.						
Language is used grammatically; punctuation is correct; words are spelled correctly.						
Writing is concise.						
Overall Evaluation						
Numerical Range	0-50	51-69	70-79	80-89	90-100	

Student: _____

Version: _____

Grader: _____

Grade: _____ /100

Grading Distribution Between Content and Communications

Table I. 16.621 Grade Allocation

Assessment Tool	% Final Grade
3 Notebook Checks	9%
Version I	10%
Version I revised and Version II	10%
Oral Project Proposal (I,II)	20%
Advisor's Grade - I	10%
Final Written Proposal	20%
Advisor's Grade - II	10%
Technical Staff Grade	10%
Subject Evaluation	1%

Table II. 16.622 Grade Allocation

Assessment Tool	% Final Grade
3 Notebook Checks	9%
Oral Progress Report	15%
Final Oral Presentation	20%
Final Written Report	25%
Advisor's Grade	20%
Technical Staff Grade	10%
Course Evaluation	1%

For shaded assignments, 60% of grade given by Course 16 Faculty and 40% given by Writing Faculty.

For both 16.621 and 16.622, 24% of total grade based upon communications. Or for 16.621 plus 16.622, 4.32 of 18 total subject units are allotted to communications.

Dealing with Multiple Graders

- Multiple Course 16 Faculty will grade your written and oral assignments.
 - For example, Profs Deyst, Greitzer and Murman will each grade Version I of your proposal.
- The faculty's evaluations are subjective.
 - They may not be the same.
 - They might be in conflict.
 - They might not agree with your advisor's viewpoint.
- This may be a new experience for you.
 - In technical subjects, correct answer is usually not subjective.
 - In non-technical subjects, there is usually only one grader.
- Multiple reviews are the norm in evaluation of research proposals and papers, and often the reviewers do not agree.

Example of Two Conflicting Reviews

- Actual contents of the review of a paper submitted to the International Gas Turbine Institute annual conference (Turbo Expo).
 - Reviewer #1: “The authors are to be congratulated on an excellent use of CFD [computational fluid dynamics]. The work leads to increased understanding of a physical flow mechanism and is shown to be consistent with experimental results.”
 - Reviewer #2: “The authors attempted to study the upstream unsteady effects on rotor tip clearance flow.....The CFD model (wake + rotor) used by the authors is not adequate to represent the true multi-blade row situation, especially when the blade row gap is small.”

Dealing with Conflicting Evaluations

- Complain to Instructor in Charge.
- Ignore the one(s) you don't like.
- Understand and resolve the evaluations.
 - Ask for clarification from each evaluator.
 - Meet with all the stakeholders at once to resolve issues.

Team Meetings with all stakeholders are scheduled between Versions I and II and Versions II and III to resolve issues.

Division of Work Within Teams

Working together

Partners are expected to work together in defining the problem, exploring design options, constructing the apparatus, taking data, and discussing other aspects of their project.

Because of the team nature of the course, a few clarifications relating to academic honesty are provided below.

Oral progress reports and oral presentations are regarded as a combined effort and normally are graded as such. Partners should participate equally in both the presentation and the question-and-answer session.

Figures, tables of data, graphs, and typeset equations used in oral and written deliverables can and likely should be prepared jointly between team members.

Working separately

Notebooks must be kept separately.

Written material reflects the degree of understanding, which you have gained from the work, and your capacity to convey the results to others. Everyone is highly encouraged to discuss organization, results, conclusions, etc. with your partner, faculty advisor, and 16.62x staff members. However, the 16.621 project proposals and any solely authored 16.622 final written reports must be individual efforts. Duplication or direct paraphrasing of text is not allowed and is considered to constitute plagiarism. **An exception to this is that the Hypothesis, Objective, and Success Criteria statements must be the same for all members of a team.**