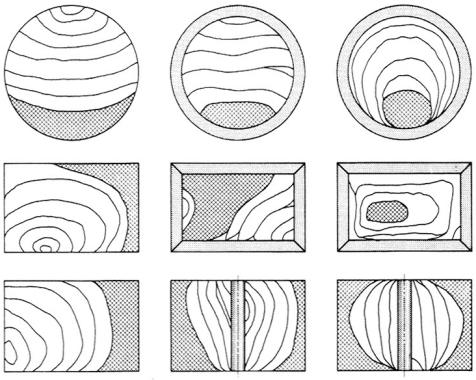

FAILURE ANALYSIS & PREVENTION

Homework 7: movies and lifelong learning

engr 3820

1. MOVIE SCRIPT EDITING

It's time for your 15 minutes of fame! Well, it's more like 2 minutes, and not really fame, per se. For this assignment, you'll form a team to tackle the editing of a portion of the *No Highway in the Sky* movie script. The goals for this assignment are: (1) apply your knowledge of materials science theory and failure analysis to increase the accuracy of a technical discussion in the movie, and (2) have fun. You and your team will act out the new script in class on Tuesday, November 09. Maybe we'll even set up a camera and record our own HD movies!

Figure 1. No Highway in the Sky movie poster.
http://www.doctormacro1.info/Movie%20Summaries/N/No%20Highway%20in%20the%20Sky.htm.

Instructions. Rewrite the following scene for improved technical accuracy, and brush up on your acting skills. I'll set up the movie on a computer in AC425 by Friday, November 05, in case you'd like to watch the scene again before you edit the script. Bring your revised script to class on Tuesday, November 09. Include a bibliography of technical references that support your revised script.

The Scene. In the car, riding home from work, conversation between Theodore Honey and Dennis Scott. Time marker: 10:00

Dennis Scott:	I was quite interested in that experiment of yours with the Reindeer tail group. Would you like to tell me just what your idea is?
Theodore Honey:	Well it's rather difficult to explain a thing like that in words with one syllable.
Dennis Scott:	Well, I have managed as much as two syllables on occasion, Mr. Honey.
Theodore Honey:	Well to put it as simply as I can, the purpose of my work has been to arrive at an end result for the original theoretical hypothesis of Kirstling of Ball and Schilgaard of Obsala, in which they postulate vibration is a source of energy. I reasoned that since this energy does not appear in any of the ordinary forms such as heat or electrical potential, it must be absorbed by the metal itself, and that sufficient absorption would result in nuclear fission of the aluminum atom in an isotropic form with crystalline affinities.
Dennis Scott:	I see. And that means the tail will fall off.
Theodore Honey:	Exactly.

Figure 2. Theodore Honey, brilliant scientist, in the laboratory.
http://www.doctormacro1.info/Movie%20Summaries/N/No%20Highway%20in%20the%20Sky.htm.

2. LLL SELF-REFLECTION

As you know, a big part of the *Failure Analysis and Prevention* course is development of skills and attitudes that help you attain success in unstructured learning experiences, and that help you articulate and make progress toward your own learning goals.

Olin's current definition of life-long learning competency is: *Student is able to identify and to address his/her own educational needs in a changing world.* One of our course learning objectives is aimed directly at life-long learning skill building. This learning objective appears in the syllabus as follows: *Demonstrate a capacity for self-directed learning, including goal setting, selection of learning strategies, time and effort regulation, motivation management, resource discovery, and self-reflection and self-assessment.*

For this assignment, please write a statement of the role of the *Failure* course in your development of skills, behaviors, or attitudes relevant to self-directed learning. **Submit a document up to one page in length to me via email**.

Some aspects of the course experience that you may consider reflecting upon include the following:

- *Personal learning goals*: You wrote some personal learning goals near the start of the term. In what ways are you making progress toward your goals? What are the challenges with attaining your goals?
- *Attitudes, motivations, and social interactions:* This relates to your learning style, interactions with your peers and instructors, perseverance, motivation, interest, self-regulatory skills, ability to relate classroom learning to your values or context, etc.
- *Cognitive and metacognitive development*: You are asked to design, initiate, and manage projects and experiments throughout the semester. You are in control of much of your content acquisition and learning processes. You identify problems and knowledge needs, you establish goals, you diagnose issues, and you plan, monitor, and modify your learning strategies. You likely reflect on your experiences and adjust your thinking, behaviors, or processes in response to your self-evaluations.
- *Identification, use, and evaluation of information resources and tools:* For our projects, you need to locate relevant information sources, assess the quality and relevance of the information, and demonstrate the ability to work with this information by contextualizing it and adding your own interpretation. You must find effective ways to communicate your findings to your instructors and peers. In addition, you select tools (equipment, software, etc.) that are appropriate for your project goals. In some cases, you may have taught yourself how to use new tools or techniques.

Please provide some thoughtful reflection on your lifelong learning development, not just a statement of what you've done in the course. Has the course format helped your skill building in these or other areas? Do you find that the course format is working for you, or are you missing something that you need for effective development? How are you handling the open-ended nature of the projects? Have you learned anything about your learning style, processes, or behaviors? Any new insights regarding your own growth?