



DREXEL UNIVERSITY
College of
Engineering

Graduate Certificate in Engineering Management Essay Prompts

Please select one of the following essays to include with your application to the Graduate Certificate in Engineering Management program.

Essay Prompt #1 (Technical Analysis Problem): An engineer is assigned to find out why a piece of metal hardware designed to hold a pipe in place has failed. In this situation, training tells the engineer to analyze the metal hardware to see if the support failed because of an incorrect design. Investigation shows, however, that the pipe has totally corroded from the inside: nothing is left for the pipe support to grip.

The above example demonstrates the application of critical thinking: The real problem differs from the assumed problem. Learning how to handle such situations through critical thinking is a core goal of our program.

For your essay, describe a situation where the determined facts were contrary to your education.

- **Describe the conflict between the determined facts and your educational background. Use terminology that a general audience can readily understand, or clearly define any technical terms. Be concise.**
- **Communicate how the problem was solved. Analyze the process objectively.**
- **Describe how an education in Engineering Management could improve on the problem-solving methods that you have described.**

Essay Prompt #2 (Human Resources Problem): Suppose that a graduate of Drexel's Engineering Management Program has recently been promoted to project manager (PM). One of the new PM's first tasks is to hire four engineers to be supervised for a crucial two-year project. Six months into the project, the PM concludes that one of the recently hired engineers is not performing at an acceptable level, despite repeated performance evaluations and constructive feedback.

After speaking with Human Resources to determine the appropriate procedures, the PM realizes that such matters are left entirely to the PM's discretion. The delay in searching for the correct replacement, however, may seriously jeopardize the timely completion of the project.

- **Identify the Project Manager's options.**
- **Present the costs and benefits of each of the Project Manager's options.**
- **Explain the critical thinking behind each decision.**