Working With Engineering Writing

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Why Engineering?

Offers Solutions for Problems

Uses Technology for Offering Those Solutions

e.g. Problems in Transport (Need for Speed)

- Air Travel

Relationship Between Science & Engineering

Science is the Foundation

Engineering Offers Application of Science

How Does It Solve Problems?

Uses Science for Offering Solutions

eg. principles of science underlie flight

Engineers Create a Variety of Flying Devices (from toy gliders to fly by wire airplanes using those principles)

What is Engineering Subject Matter?

Processes and Processes

Both Science and Engineering are Constituted of various processes

Engineering Uses the Processes of Science and Creates Engineering Processes for Solving Problems

What is Engineering Writing Then?

The Subject Matter Matters

Conventions for Communicating Subject Matter Matter

What Is Engineering Writing Then?

Explains These Processes

Addresses the "How" and "Why" Questions

How do they happen?

Why do they happen?

What IsEngineering Writing Then?

Persuades Audiences Concerning These Processes

Offers Instrutions For Managing These Processes

Some Types of Engineering Documentation

Reports

Software Documentation

Hardware Documentaton

Others Not Mentioned Here

Who Is The Writing For?

Engineers

Non Engineers (for example, from the world of Business)

Both

ABET as well considers communication and audience awareness an important aspect of the education engineers receive

Genres of Engineering Documentation

Rhetorical Genres With Engineering Specific Applications

Expository Writing (Software Documentation)

Reporting Information (Reports, Product Specs.)

Persuasive Writing (Proposals, Request for Proposals)

Instructional Writing (Hardware and Software Documentation)

Drafts of Engineering Writing: Some Thoughts

Students Need Exposition for Explaining The Engineering Processes Involved

Students Need Persuasion for Persuading Readers

Engaging With The Writing

Content (subject matter)

  or

Form (language, grammar, and punctuation)

  or

Both

Both Would Be Better

Form and Content Go Together

Engaging with Both Form and Content Will Engage with The Writing Substantively

Levels of Comprehension

Can Respond To Some Drafts On One's Own

eg. Capstone Project Proposals

Levels of Comprehension - Documentation for Software Code

Need More Knowledge of Subject Matter For Some

eg. Software Documentation

And Some Fall Inbetween

Levels of Comprehension

- Ask Questions

- Ask for Explanations

- Bring up Questions that the person teaching the course can address

Connect and Collaborate

Connectand collaborate with course teacher

Questions About Subject Matter (Process)
eg. scientific thought processes involving numbers and symbols

Connect And Collaborate

Distinctive Modes of Revising and Editing

(Defined by The Boundaries of Subject Matter)

Nature Of Processes

Processes Operate in Time and Space

Visuals, Worth A 1000 Words?

Processes operate in Time and Space and Picture can be Worth a thousand words while communicating processes

- Do the visuals and written text complement each other?

- Is the reader able to use the visuals for better understanding the written text and vice versa?