

21W.732 PROCESSES SUMMARY

WRITING, GRAPHICS, AND ORAL PRESENTATIONS	READING	MEETINGS	PREP	FRDPARRC/DETERMINISTIC DESIGN
<p>Sources: Dave's ranting</p> <p>Overview:</p> <ul style="list-style-type: none"> <li>○ The production of successful communication requires a process that is iterative, recursive, non-linear, and fractal.</li> <li>○ The challenge is 2-fold: author/reader mismatch and convention juggling.</li> <li>○ Successful communication requires both time and a time/effort integral.</li> <li>○ The process deserves PREP or other forms of collaboration.</li> </ul> <p>Details:</p> <p>The process elements that must be iterated in a non-linear, fractal manner:</p> <ul style="list-style-type: none"> <li>○ Procrastinate</li> <li>○ Brainstorm</li> <li>○ Organize</li> <li>○ Research</li> <li>○ Start writing</li> <li>○ Edit</li> <li>○ Finish</li> </ul>	<p>Source: Kishlansky &amp; Dave's ranting</p> <p>Overview:</p> <ul style="list-style-type: none"> <li>○ Reading is a process that is iterative, recursive, non-linear, and fractal.</li> <li>○ The reading process connects texts, ideas, society, authors, readers, and the physical world. The connections are notoriously nonlinear, fractal, and tangled.</li> <li>○ For the purposes of 21W.732, the reading focuses on the situation of engineers in the grand scheme of things and the acquisition of information required for the design process.</li> <li>○ Successful reading requires both time and a time/effort integral.</li> </ul> <p>Details:</p> <p>To claim you have read a document implies that you have answered these 9 questions:</p> <p>Level I questions:</p> <ul style="list-style-type: none"> <li>○ Who wrote the document?</li> <li>○ Who was the intended audience?</li> <li>○ What is the content?</li> </ul> <p>Level II questions:</p> <ul style="list-style-type: none"> <li>○ Why was the document written?</li> <li>○ What type of document is this?</li> <li>○ What are the assumptions of the document?</li> </ul> <p>Level III questions:</p> <ul style="list-style-type: none"> <li>○ Can I believe this document?</li> <li>○ What can I learn about society from this document?</li> <li>○ What does this document mean to me?</li> </ul>	<p>Source: Dave's ranting</p> <p>Overview:</p> <ul style="list-style-type: none"> <li>○ For time scales &gt;&gt; than meeting duration, meetings are discrete events in time; thus, at a large scale, the meeting process is linear:             <ol style="list-style-type: none"> <li>1. Agenda</li> <li>2. Preparation</li> <li>3. Meeting</li> <li>4. Minutes</li> </ol> </li> <li>○ Successful meetings require both time and time/effort integral.</li> </ul> <p>Details:</p> <p>Hints for each process step:</p> <p>Agenda: Each item deserves a time estimate, and categorization along the lines of information, discussion, decision, and action.</p> <p>Preparation: Do what you need to do to ensure the success of the meeting.</p> <p>Meeting: three stool legs: attend, participate, and permit/coerce others to participate.</p> <p>Minutes: Document accomplishments, decisions, and action items.</p>	<p>Source: Marc's journal article</p> <p>Overview:</p> <ul style="list-style-type: none"> <li>○ Collaboration is a synergistic combination of individual contributions.</li> <li>○ Collaboration is a process that is iterative, recursive, non-linear, and fractal.</li> <li>○ Successful collaboration requires both time and a time/effort integral.</li> </ul> <p>Details:</p> <p>Process steps for collaboration:</p> <ul style="list-style-type: none"> <li>○ Individual contribution of thought and/or action</li> <li>○ Individual recognition of other team members' contributions</li> <li>○ Individual response to team members' contributions</li> <li>○ Synthesis of team outcomes from the individual contributions.</li> </ul>	<p>Source: <a href="http://web.mit.edu/sp.784/www/DOCUMENTS/Process%20of%20Design%20(Slocum,%20MIT).pdf">http://web.mit.edu/sp.784/www/DOCUMENTS/Process%20of%20Design%20(Slocum,%20MIT).pdf</a></p> <p>Overview:</p> <ul style="list-style-type: none"> <li>○ Design is a process that is iterative, recursive, non-linear, and fractal.</li> <li>○ The process is an organization of analysis that leads to design decisions.</li> </ul> <p>Details:</p> <p>Design steps:</p> <ul style="list-style-type: none"> <li>○ Functional Requirements</li> <li>○ Design Parameters</li> <li>○ Analysis</li> <li>○ Research</li> <li>○ Risks</li> <li>○ Countermeasures</li> </ul> <p>Design Decision (Pugh chart):</p> <ul style="list-style-type: none"> <li>○ Compare concepts</li> <li>○ Compare against vanilla concept</li> <li>○ Weighting scheme depends on team and mission statement.</li> </ul>