Design Principles

- NOTE: also look at Brooks discussion of "conceptual integrity"
- What is misleading about mathematics/CS as a metaphor for or view of software system design?
- Why is a "vein/artery" metaphor appropriate for SE?
- What are the problems with monolithic systems?
- What intellectual tools do we have to manage complexity? What do they do and why are they important? [These should be so indelibly imprinted on your mind that even fuller's earth . . .☺ - they will be on exams, possibly quizzes]

Design and Change

- What does Parnas suggest we do about changes? Why? How does this help in the evolution process?
- What is the primary structure that Parnas promotes? What are the strengths and weaknesses?
- How is what Parnas proposes similar to Product Lines? How is it different?
- What is a fundamental design tradeoff? Why is each alternative important?
- What are basic design goals and what do our tools for managing complexity provide us?
- What is conceptual integrity and why is it important?

Design Process

- What is the ideal design process and is it achievable?
- What is proposed by Clements and Parnas? What does it buy us – how is it useful?
- Is this a "Design Process" or a "System Creation and Evolution" process? Why?
- We have discussed the utility of documentation – what do they indicate as documentation problems? What do they consider to be good practices?
- How would you summarize what they consider to be important in their approach?