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**The Geometry Of Thinking**  
**Introduction to Buckminster Fuller's Ideas and Practices**  
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*Rev 0.2 January 12, 2019*

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### **Details**

The focus of these lectures is Bucky Fuller's work in systems. Along the way we will learn what design science is, and utilize his design principles to transform our work.

The main goal of these presentations is to learn the methods of design science, and provide opportunities to express these methods.

**Learning Objectives:** Design for sustainability means working with nature by integrating our actions and artifacts into natural systems.

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### **Required Textbooks:**

- Jay Baldwin *Bucky Works: Buckminster Fuller's Ideas for Today* (1996) ISBN-10: 0471198129
- Amy Edmondson: *A Fuller Explanation* (2009). ISBN-10 061518314X, or [http://books.google.com/books?id=F6n2dZJ1POwC&printsec=frontcover&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q&f=false](http://books.google.com/books?id=F6n2dZJ1POwC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false)

### **Recommended text:**

- Joachim Krausse and Claude Lichtenstein (ed) *Your Private Sky: R. Buckminster Fuller* (1999). ISBN-10: 3907044886
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### **Lecture 1: Mission and resource inventory**

- **Read:** The Mission of Guinea Pig B in *Buckyworks*  
**Watch:** *Drive by RSA Animate* (Daniel Pink)
- **Create:** Goal and resource inventory

### **Lecture 2: Nodes and Relations: Energy Events and System**

- **Read:** Energy Events in *A Fuller Explanation*
- **Create:** Model an energy event, create a 3D system model

### **Lecture 3: The Shape of Nature**

- **Read** Systems in *Synergetics*  
How Nature Builds in *Your Private Sky*  
Systems and Synergy; Tools of the Trade in *A Fuller Explanation*
- **Create:** Model that includes triangulation. Describe frequency in the context of your model, start exploring Synergetics

### **Lecture 4: System and you.**

- **Read** Return to Modelability in *A Fuller Explanation*  
Navigator in *Your Private Sky* (scan will be provided)
- **Create:** A boundary diagram, and a polyhedral model of yourself

### **Project**

- **Create:** A project description that includes navigation, goal, resources, map, forces, material, and timeframe

### **Lecture 5: Systems Coupling and Tensegrity.**

- **Read** Tensegrity in *Your Private Sky*  
Geodesics to Tensegrity in *A Fuller Explanation*
- **Create:** A tensegrity structure, and a model of systems coupling

### **Lecture 7: Mapping Resilience**

- **Read** Tune-in-ability in *A Fuller Explanation*  
Spaceship Earth in *Buckyworks*
- **Create:** A comprehensive anticipatory design science plan.

### **Lecture 8: Using The Tools**

- **Read** Web materials including material from *Synergetics*
- **Create:** Geoscope/Dashboard or Systems Research Lab or Model It! or Networks

### **Lecture 9: Generalized Principles**

- **Read,** Structure and Pattern Integrity and Systems and Synergy in *A Fuller Explanation*
- **Create:** Generalized principle and trimtab.