**Independent Study: Theory of Complex Systems**

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**Objective:** To develop greater understanding of the mathematical and logical concepts associated with complex systems.

**Course Credit:** 1 hour

**Textbook:** Thurner, Hanel, & Klimek (2018). *Introduction to the Theory of Complex Systems.*

**Deliverables**

Due January 30th

* Read chapter 1, “Introduction”
* Submit 1-page reflection essay

Due February 14th

* Read chapter 2, “Probability and Random Processes”
* Submit 1-page reflection essay
* Submit solutions to 3 selected textbook problems.

Due February 28th

* Read chapter 3, “Scaling”
* Submit 1-page reflection essay
* Submit solutions to 3 selected textbook problems.

Due March 15th

* Read chapter 4, “Networks”
* Submit 1-page reflection essay
* Submit solutions to 3 selected textbook problems.

Due March 30th

* Read chapter 5, “Evolutionary Processes”
* Submit 1-page reflection essay
* Submit solutions to 3 selected textbook problems.

Due April 15th

* Read chapter 6, “Statistical Mechanics and Information Theory for Complex Systems”
* Submit 1-page reflection essay
* Submit solutions to 3 selected textbook problems.