SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: HNR-213 Department: EGR

Course Title: The Creative Art of Structures Semester: Spring Year: 2018

Course Description, Prerequisite, Corequisite: Learn how to interpret and understand the built environment through technical, visual, and social analysis and critique of towers, bridges, tall buildings, and vaulted roof structres. *The Creative Art of Structures* is a historical survey of structural engineering through the lens of design excellence. The world's most iconic structures will be studied from engineering, architectural, cultural, and social perspectives and structural engineering will be presented as an art form rather than just a technical endeavor. Open to all students—no engineering background is necessary. Pre-requisites: MAT-124 and ENG-101.

Course Objectives	Competencies
1. Investigate structures using an interdisciplinary approach.	1. Student demonstrates ability to evaluate structures as art and engineers as structural artists. 2. Student uses ability to analyze structures, structural materials, and structural engineers in various and appropriate contexts, including social, historical, political, scientific, and artistic.
2. Conduct independent scholarly research about the social, symbolic, and scienctific aspects of structures.	1. Student demonstrates a strong knowledge of the research process. 2. Student demonstrates familiarity with appropriate methods and sources for research, including scholarly, technical, and professional sources and databases as well as other appropriate sources.
3. Synthesize information from various sources.	1. Student demonstrates ability to compile research material. 2. Student demonstrates ability to evaluate research materials. 3. Student applies information and understanding acquired through research and other methods in written and oral critiques of structures.
4. Development of critical thinking skills appropriate to an Honors Course.	1. Student uses clear logical patterns of thinking, argumentation, and questioning, and evaluation of structures. 2. Student is able to discern different points of view in the engineering design process.