

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE  
**ACADEMIC AFFAIRS**

Course Number: ABT220      Class/Lect. Hours: 3      Lab Hours:           Credits: 3      Dept.: Architecture and Building Tech

Course Title: SUSTAINABILITY AND THE BUILT ENVIRONMENT      Semester: 3      Year: 2015

**Course Description, Prerequisite, Corequisite: ABT-150, ABT-155, or departmental permission.**

**This class will explore the issues of sustainability from the perspective of the built environment, its history of development, construction of buildings/infrastructure and its impact on the natural environment. Students will be exposed to issues of human impacts on natural systems through the built environment and the variety of disciplines that are working to create a more sustainable future.**

Course Objectives	Competencies
<ol style="list-style-type: none"> <li>1. Students will gain an understanding of the definition of sustainability in the context of the built environment.</li>   <li>2. Students will become aware of the ecological, ethical and economic issues that arise from the interaction of the built environment and natural environments.</li> </ol>	<ol style="list-style-type: none"> <li>1. Students will demonstrate an understanding of sustainability from reading assignments and classroom discussions.</li> <li>2. Students will consider sustainability related issues from a variety of perspectives including local, regional, and global case studies.</li>   <li>1. Students will consider the use of locally available materials and how their use may reduce environmental impact and establish a new relationship with the environment.</li> <li>2. Students will discuss how the use of locally available materials and labor can stimulate local economies.</li> <li>3. Students will research and discuss the advantages of “retro-</li> </ol>

Course Objectives	Competencies
<p>3. Students will be made aware of the roles that planning, design, construction and operation of the built environment can have in achieving sustainability goals.</p> <p>4. Students will be introduced to a variety of disciplines and major degree study programs that help shape these roles.</p> <p>5. Students will enhance their critical thinking, decision making and problem solving skills.</p>	<p>fitting” existing structures and “re-cycling” materials in the urban vs. rural environment.</p> <ol style="list-style-type: none"> <li>1. Students will research current building and energy code requirements and discuss how new “stretch code” requirements reduce environmental impact.</li> <li>2. Students will research and discuss “life cycle” costs of a building from design/construction through it’s use, eventual decay and final demolition.</li> </ol> <ol style="list-style-type: none"> <li>1. Students will have discussions with guest speakers from other educational/degree granting institutions.</li> <li>2. Students will meet and discuss opportunities for future employment with local business leaders.</li> <li>3. Students will make site visits to locations that are incorporating sustainable design and building techniques.</li> </ol> <ol style="list-style-type: none"> <li>1. Students will conduct scholarly research using a variety of sources.</li> <li>2. Students will synthesize their research with written and oral presentations.</li> <li>3. Students will use problem solving skills by working with case studies and making recommendations as to how new standards, design details, and construction techniques can make our built environment more sustainable.</li> </ol>