The **Smart, Healthy, Livable Cities and Sustainability** course will review and present broad system concepts for the understanding of the development of cities. More than half of the world's populations live in cities[1], while the existing public infrastructure across the USA alone is estimated to need over $2.2 trillion for maintaining sustainability[2]. Students will explore how cities can become sustainable by reviewing technologies, literature and measures across the globe.

1. **Critical factors:** Cities officials compile data to define factors affecting long ranging areas such as crime and violence to health and employment. Lectures and readings will present publications from institutions such as Center for Resilient Cities, The Sustainable Water Management Improves Tomorrows Cities Health, and the Stockholm Resilience Centre. Students will compile an annotated bibliography related to issues such as community resilience, diversity and biodiversity within their selected urban environment.

2. **Literature:** Lectures will review related publications to define social, economic, and environmental requirements for sustainability. The course will discuss additional issues exploring human development to emphasize values and goals for increased life expectancy, education, equity, and opportunity. Student teams focused on selected locations will compile economic development measures such as employment, consumption, and wealth. Finally, each student will identify key issues for a selected community and designate a score assessment based on data compilation and literature.

3. **Standard Measures:** Course discussions will review impacts to biological resources based on policies and existing laws, such as endangered species, environmental impact assessments, transportation planning, floodplains, coastal areas, and land use planning and zoning laws. Students will complete LEED Neighborhood Development Project Scorecards regarding their preferred location to represent a community assessment parallel to literature developed score assessments previously submitted.

4. **Recommendations:** Student teams will reconvene to explore and discuss the different measure and scores developed to represent ideal Healthy Livable Cities. Students will identify gaps in regulations that affected their scores through a 2500 word policy paper.

5. **Conceptualizations:** Final classes will provide time for student team presentations regarding proposed policies for their selected locations. Team collaboration techniques will be used to support peer evaluation and encourage deep discussions into innovation.

The main objective of this course is to provide the interactive forum to inspire innovative sustainable solutions to city policy and infrastructure shortfalls. Creating Healthy Livable City scores based on the research literature will allow students to examine these tools for measuring social, economic and environmental progress. The standard LEED analytical processes will be supplemented by detailed readings exploring the bio-diversity and eco-system services within the city. The course concludes with students sharing new insights and lessons learned toward creating Smart, Healthy, and Livable Sustainable Resilient Cities.