## COURSE OUTLINE: NET207 - NATURAL URBAN ENVIRO

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Approved: Sherri Smith, Chair, Natural Environment, Business, Design and Culinary

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| **Course Code: Title** | NET207: NATURALIZING URBAN ENVIRONMENTS |
| **Program Number: Name** | 5220: NAT ENVIRONMENT TN |
| **Department:** | NATURAL RESOURCES PRG |
| **Academic Year:** | 2022-2023 |
| **Course Description:** | Due to the rapid pace of urbanization, the benefits of healthy green infrastructure in cities is increasingly recognized and in demand. This course explores the social, economic and environmental impacts of urbanization and introduces strategies to reconnect people and incorporate nature back into cities. Topics in urban forestry and approaches for sustainable greenspace management in urban areas will be a major focus. Students will conduct an urban tree inventory and will perform the steps necessary to plan a naturalization project for a local urban greenspace. Emphasis will be on the promotion of native plant community assemblages and wildlife biodiversity. |
| **Total Credits:** | 3 |
| **Hours/Week:** | 3 |
| **Total Hours:** | 42 |
| **Prerequisites:** | There are no pre-requisites for this course. |
| **Corequisites:** | There are no co-requisites for this course. |
| **Substitutes:** | NET254 |
| **Vocational Learning Outcomes (VLO's) addressed in this course:**<br><br>**Please refer to program web page for a complete listing of program outcomes where applicable.** | **5220 - NAT ENVIRONMENT TN**<br>VLO 1 Collect data from representative biological and environmental samples using routine test procedures.<br>VLO 2 Utilize natural resources equipment and technology to accurately identify ecosystem components for purposes of conserving and managing natural resources.<br>VLO 3 Apply the basic concepts of science to natural resource conservation and management.<br>VLO 4 Conduct natural environment assessments according to standard field survey methods, including the use of appropriate equipment and materials.<br>VLO 6 Practice principles and ethics associated with natural resource conservation and management issues.<br>VLO 7 Work safely in adherence to occupational health and safety standards.<br>VLO 8 Complete all work in compliance with applicable municipal, provincial and federal standards and guidelines.<br>VLO 10 Perform basic project management support techniques.<br>VLO 11 Communicate technical information accurately and effectively in oral, written and visual forms. |

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| | VLO 13 | Apply awareness of global environmental issues to conservation and management of natural resources. |
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| **Essential Employability Skills (EES) addressed in this course:** | EES 1 | Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. |
| | EES 2 | Respond to written, spoken, or visual messages in a manner that ensures effective communication. |
| | EES 5 | Use a variety of thinking skills to anticipate and solve problems. |
| | EES 6 | Locate, select, organize, and document information using appropriate technology and information systems. |
| | EES 7 | Analyze, evaluate, and apply relevant information from a variety of sources. |
| | EES 8 | Show respect for the diverse opinions, values, belief systems, and contributions of others. |
| | EES 9 | Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. |
| | EES 10 | Manage the use of time and other resources to complete projects. |
| | EES 11 | Take responsibility for ones own actions, decisions, and consequences. |
| **General Education Themes:** | Civic Life | |
| | Social and Cultural Understanding | |
| | Science and Technology | |
| **Course Evaluation:** | Passing Grade: 50%, D | |
| | A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation. | |
| **Other Course Evaluation & Assessment Requirements:** | Academic success is directly linked to attendance. Missing more than 1/3 of the course hours in a semester shall result in an `F` grade for the course. | |

**Course Outcomes and Learning Objectives:**

| Course Outcome 1 | Learning Objectives for Course Outcome 1 |
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| Discuss current and historical trends in land use and the resulting social, economic and environmental impacts in urban areas. | 1.1 Define urban sprawl and appreciate the forces that contribute to sprawling patterns in cities.<br>1.2 Explain how human population growth in cities is predicted to further influence land use and development.<br>1.3 Discuss the social, economic and environmental impacts of land use and development in cities.<br>1.4 Discuss current human attitudes towards nature in cities.<br>1.5 Identify government and municipal responses to urban development. |
| **Course Outcome 2** | **Learning Objectives for Course Outcome 2** |
| Describe the urban ecosystem and understand the conditions that influence the ability for species to inhabit cities. | 2.1 Define urban ecology and describe the urban landscape.<br>2.2 Apply the principles of ecology to urban ecosystems.<br>2.3 Understand ecosystem services and how these are important to the health, resiliency and biodiversity of urban ecosystems. |

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| | 2.4 Compare/contrast urban and natural environments with respect to climate, hydrology, soil condition, plant and animal community composition and trophic dynamics.<br>2.5 Discuss the challenges and limitations presented by urban ecosystems and how some flora and fauna adapt to these conditions. |
| **Course Outcome 3** | **Learning Objectives for Course Outcome 3** |
| Demonstrate an understanding of naturalization in an ecological context and describe methods and strategies used to restore the ecological components of urban landscapes. | 3.1 Understand and explain naturalization concepts.<br>3.2 Understand basic concepts in landscape ecology and how they apply to urban environments.<br>3.3 Recognize the variety of greenspaces in cities.<br>3.4 Discuss strategies used to naturalize urban environments and promote and enhance urban greenspaces.<br>3.5 Discuss potential resistance to naturalization projects in urban environments.<br>3.6 Discuss approaches to educate people and promote community involvement. |
| **Course Outcome 4** | **Learning Objectives for Course Outcome 4** |
| Perform the steps necessary to prepare a site plan for an urban naturalization project. | 4.1 Conduct a site inventory to obtain information on existing vegetation and wildlife, soil conditions, microclimate, slope, topography, etc.<br>4.2 Evaluate site characteristics and identify project goals and objectives.<br>4.3 Prepare a site plan to identify areas where naturalization projects may be implemented.<br>4.4 Research and identify potential naturalization techniques.<br>4.5 Provide recommendations for site improvement.<br>4.6 Research and select native plant communities suitable for the local site conditions. |
| **Course Outcome 5** | **Learning Objectives for Course Outcome 5** |
| Appreciate the value of urban forests and identify the main components of an urban forest management plan. | 5.1 Discuss the economic, social and ecological values of healthy urban forests and street trees.<br>5.2 Outline the goals and objectives of an established urban forest management plan.<br>5.3 Identify the major challenges and potential solutions in urban forestry.<br>5.4 Conduct a tree inventory.<br>5.5 Analyze and interpret tree inventory data to determine tree density, species composition and general condition of health.<br>5.6 Research and provide recommendations for a forest management strategy. |
| **Course Outcome 6** | **Learning Objectives for Course Outcome 6** |
| Evaluate employment opportunities in urban environments. | 6.1 Research potential employers offering natural environment related positions in urban areas.<br>6.2 Summarize the different types of natural environment jobs that are available in urban areas.<br>6.3 Identify specific knowledge and skill sets required for employment in urban environments. |

| | Evaluation Type | Evaluation Weight |
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| **Evaluation Process and Grading System:** | Assignments | 20% |
| | Course Project | 30% |
| | Discussions | 20% |
| | Quizzes | 10% |
| | Tests | 20% |

**Date:** August 31, 2022

**Addendum:** Please refer to the course outline addendum on the Learning Management System for further information.