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| **Course Code: Title** | NRT248: FOREST MANAGEMENT AND PLANNING |
| **Program Number: Name** | 5230: FORESTRY TECHNICIAN |
| **Department:** | NATURAL RESOURCES PRG |
| **Semesters/Terms:** | 22W |
| **Course Description:** | Forest Management and Planning focuses on a wide range of resource management issues that relate to the forest management planning process in Ontario. Emphasis is placed on legislation and practical aspects of planning for forest access, forest harvesting and silvicultural operations. The Forest Management and Planning Manual, Landscape Guide, Stand and Site Guide, and A Guide to Stewardship Planning for Natural Areas will act as references. Emphasis will be placed on incorporating practical GIS applications into labs and projects. |
| **Total Credits:** | 4 |
| **Hours/Week:** | 4 |
| **Total Hours:** | 60 |
| **Prerequisites:** | There are no pre-requisites for this course. |
| **Corequisites:** | There are no co-requisites for this course. |
| **Substitutes:** | NRT224 |
| **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.** | **5230 - FORESTRY TECHNICIAN**<br>VLO 1   Conduct forest inventory surveys and field measurements to determine forest resources and values in forests and woodlots.<br>VLO 2   Assess soil characteristics, vegetation and wildlife habitats to identify their interactions within forest ecosystems.<br>VLO 4   Collect, analyze, interpret, and display spatial data using mapping technology and Geographical Information Systems (GIS) to contribute to forest resource management.<br>VLO 5   Contribute to sustainable forest management plans, including conservation and rehabilitation measures, taking into consideration the perspectives of a variety of stakeholders and the requirements of relevant legislation and regulations.<br>VLO 6   Identify and analyze forest diseases, pests, invasive species and other disturbance events and implement mitigation strategies to maintain and improve forest ecosystems.<br>VLO 7   Select, operate, troubleshoot and maintain tools and equipment in a variety of environmental conditions and in accordance with safety and operating standards.<br>VLO 8   Work independently and in a collaborative environment while applying effective teamwork, leadership and interpersonal skills.<br>VLO 9   Communicate technical information to a variety of stakeholders in oral, written, visual and electronic forms. |

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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 3 Execute mathematical operations accurately. |
| | EES 4 Apply a systematic approach to solve problems. |
| | 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. |
| **Course Evaluation:** | Passing Grade: 50%, D<br><br>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 that 1/3 of the course hours in a semester shall result in an `F` Grade for the course. |
| **Books and Required Resources:** | A Guide to Stewardship Planning for Natural Areas, 2012 by MNRF<br><br>Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales, 2010 by MNRF<br><br>Forest Management Guide for Great Lakes - St. Lawrence Landscapes, 2010 by MNRF<br><br>Forest Management Planning Manual for Ontario`s Crown Forests, 2009 by MNRF |

Above VLO 10 row:

VLO 10 Develop strategies for ongoing professional development to enhance work performance in the forestry sector.

**Course Outcomes and Learning Objectives:**

| Course Outcome 1 | Learning Objectives for Course Outcome 1 |
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| Understand concepts and terms in strategic planning. | 1.1 Knowledge and understanding of the Forest Management Planning Manual.<br>1.2 Knowledge and understanding of the Stand and Site Guide.<br>1.3 Knowledge and understanding of the Landscape Guide.<br>1.4 Understanding of the key milestones of strategic planning in Ontario.<br>1.5 Understand the Crown Forest Sustainability Act. |
| **Course Outcome 2** | **Learning Objectives for Course Outcome 2** |
| Complete technical | 2.1 Knowledge and understanding of sizing water crossings. |

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| | requirements of operational planning. | 2.2 Knowledge and understanding of selecting harvest areas.<br>2.3 Knowledge and understanding of forest access road planning.<br>2.4 Knowledge and understanding of forestry pit planning.<br>2.5 Knowledge and understanding of renewal and maintenance.<br>2.6 Developing Area Of Concern (AOC) prescriptions.<br>2.7 Developing Silvicultural Ground Rules (SGR).<br>2.8 Developing Conditions on Regular Operations (CRO).<br>2.9 Knowledge and understanding of the public consultation process. |
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| | **Course Outcome 3** | **Learning Objectives for Course Outcome 3** |
| | Become familiar with Annual Work Schedules (AWS). | 3.1 Create an Annual Work Schedule using supplied and collected data and the required texts.<br>3.2 Knowledge and understanding of the components of an AWS.<br>3.3 Locate and selecting water crossings.<br>3.4 Select and developing harvest areas.<br>3.5 Locate roads and selecting forestry pit locations.<br>3.6 Select appropriate areas for renewal and maintenance.<br>3.7 Develop appropriate Area of Concern (AOC) prescriptions.<br>3.8 Develop appropriate Silvicultural Ground Rules (SGR) and Conditions on Regular Operations (CRO). |
| | **Course Outcome 4** | **Learning Objectives for Course Outcome 4** |
| | Become familiar with Annual Report (AR) requirements. | 4.1 Create an Annual Report using supplied data and the required texts.<br>4.2 Report Forest Operations.<br>4.3 Report Monitoring and Assessment.<br>4.4 Compile Annual Report tables.<br>4.5 Compile Annual Report information products. |
| | **Course Outcome 5** | **Learning Objectives for Course Outcome 5** |
| | Develop a Managed Forest Tax Incentive Program (MFTIP) plan. | 5.1 Knowledge and understanding of the MFTIP.<br>5.2 Knowledge and understanding of components of a MFTIP plan including landowner objectives, values located on the property and the ten year activity summary.<br>5.3 Create a MFTIP plan using supplied data or student collected field data. |

**Evaluation Process and Grading System:**

| Evaluation Type | Evaluation Weight |
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| Assignments | 80% |
| Quizzes | 20% |

**Date:** September 3, 2021

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

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