



COURSE OUTLINE: NRT0123 - OUTDOOR NAVIGATION

Prepared: Lawrence Foster

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

Course Code: Title	NRT0123: OUTDOOR NAVIGATION
Program Number: Name	1120: COMMUNITY INTEGRATN
Department:	C.I.C.E.
Academic Year:	2022-2023
Course Description:	CICE students, with the assistance of a learning specialist, will gain skills in orienteering and navigating in forested areas using a magnetic hand compass, topographic maps (OBM, NTS), OMNR standard aerial photographs and global positioning systems (GPS). CICE students, with the assistance of a learning specialist, will use a navigational protractor, metric scale and or Google Earth Pro in the planning and presentation of field exercises. Pacing and distance measurement devices (50 m rope, 30 m tape) will be used to measure distances in a team environment. Calculations of distance, area and pacing factors will be covered.
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.
Vocational Learning Outcomes (VLO's) addressed in this course:	1120 - COMMUNITY INTEGRATN
Please refer to program web page for a complete listing of program outcomes where applicable.	VLO 1 Integrate fully in academic, social and community activities.
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 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 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:	<p>Passing Grade: 50%, D</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>																								
Other Course Evaluation & Assessment Requirements:	<p>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.</p>																								
Books and Required Resources:	<p>NTS 1:50 000 Topographic Map Sheets #41 K/9</p> <p>Outdoor Navigation Course Manual Publisher: Sault College</p>																								
Course Outcomes and Learning Objectives:	<p>Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will acquire varying levels of skill development relevant to the following learning outcomes:</p> <table border="1"> <thead> <tr> <th>Course Outcome 1</th> <th>Learning Objectives for Course Outcome 1</th> </tr> </thead> <tbody> <tr> <td>Be able to use a magnetic hand compass and navigate to a destination.</td> <td> 1.1 Determine true and magnetic azimuths and convert from one to the other. 1.2 Understand and set magnetic declination on a compass. </td> </tr> <tr> <th>Course Outcome 2</th> <th>Learning Objectives for Course Outcome 2</th> </tr> <tr> <td>Be able to determine distances by pacing and measuring distances using a 30 m or 50 m tape.</td> <td> 2.1 Determine pacing factor and be able to pace distances in summer and winter. 2.2 Be able to maintain and properly store equipment. </td> </tr> <tr> <th>Course Outcome 3</th> <th>Learning Objectives for Course Outcome 3</th> </tr> <tr> <td>Be able to use OMNR aerial photographs, OBM and NTS maps in order to travel from one location to another using a magnetic hand compass.</td> <td> 3.1 Understand scales of photographs and maps. 3.2 Identify major features on aerial photographs and cover type changes. 3.3 Be able to measure distances and directions on aerial photographs and maps. 3.4 Be able to calculate directions on a map and aerial photograph using a navigational protractor. </td> </tr> <tr> <th>Course Outcome 4</th> <th>Learning Objectives for Course Outcome 4</th> </tr> <tr> <td>Be able to use and understand the principles of Global Positioning Systems (GPS).</td> <td> 4.1 Understand the accuracy of GPS receivers (GPS). 4.2 Be able to mark (enter) a field position in the GPS while in the field. 4.3 Be able to enter a field position using map co-ordinates. 4.4 Be able to navigate to way points entered into the GPS using a compass and the GPS. 4.5 Be able to record positions from the GPS onto a map. </td> </tr> <tr> <th>Course Outcome 5</th> <th>Learning Objectives for Course Outcome 5</th> </tr> <tr> <td>Be able to determine areas using maps and mapping software.</td> <td> 5.1 Be able to measure areas using a compass and the line transect method. 5.2 Be able to measure area using computer software. </td> </tr> <tr> <th>Course Outcome 6</th> <th>Learning Objectives for Course Outcome 6</th> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	Course Outcome 1	Learning Objectives for Course Outcome 1	Be able to use a magnetic hand compass and navigate to a destination.	1.1 Determine true and magnetic azimuths and convert from one to the other. 1.2 Understand and set magnetic declination on a compass.	Course Outcome 2	Learning Objectives for Course Outcome 2	Be able to determine distances by pacing and measuring distances using a 30 m or 50 m tape.	2.1 Determine pacing factor and be able to pace distances in summer and winter. 2.2 Be able to maintain and properly store equipment.	Course Outcome 3	Learning Objectives for Course Outcome 3	Be able to use OMNR aerial photographs, OBM and NTS maps in order to travel from one location to another using a magnetic hand compass.	3.1 Understand scales of photographs and maps. 3.2 Identify major features on aerial photographs and cover type changes. 3.3 Be able to measure distances and directions on aerial photographs and maps. 3.4 Be able to calculate directions on a map and aerial photograph using a navigational protractor.	Course Outcome 4	Learning Objectives for Course Outcome 4	Be able to use and understand the principles of Global Positioning Systems (GPS).	4.1 Understand the accuracy of GPS receivers (GPS). 4.2 Be able to mark (enter) a field position in the GPS while in the field. 4.3 Be able to enter a field position using map co-ordinates. 4.4 Be able to navigate to way points entered into the GPS using a compass and the GPS. 4.5 Be able to record positions from the GPS onto a map.	Course Outcome 5	Learning Objectives for Course Outcome 5	Be able to determine areas using maps and mapping software.	5.1 Be able to measure areas using a compass and the line transect method. 5.2 Be able to measure area using computer software.	Course Outcome 6	Learning Objectives for Course Outcome 6		
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	Use and interpret topographic maps (OBM, NTS). This includes being able to accurately reference any point using latitude/longitude as well as UTM co-ordinates.	6.1 Recognize the different ways of expressing scale. 6.2 Identify all lines, numbers and symbols on maps. 6.3 Recognize the divisions used on a map to measure long/lats and UTM co-ordinates. 6.4 Draw topographic profiles, create digital topographic profiles and calculate gradients. 6.5 Be able to read contour lines and determine elevations and major topographic features.
	Course Outcome 7	Learning Objectives for Course Outcome 7
	Use basic equipment including the metric scale, distance measurement devices, and navigational protractor.	7.1 Use the metric scale for distance measurements on a variety of maps with various scales. 7.2 Measure directions and apply magnetic declination on maps using a navigational protractor. 7.3 Properly use a distance measurement device.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	40%
Quizzes	10%
Tests	50%

CICE Modifications:

Preparation and Participation

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

A. Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor.

B. Tests may be modified in the following ways:

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

C. Tests will be written in CICE office with assistance from a Learning Specialist.



The Learning Specialist may:

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

D. Assignments may be modified in the following ways:

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

The Learning Specialist may:

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

E. Evaluation:

Is reflective of modified learning outcomes.

NOTE: Due to the possibility of documented medical issues, CICE students may require alternate methods of evaluation to be able to acquire and demonstrate the modified learning outcomes

Date:

August 31, 2022

Addendum:

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

