



# COURSE OUTLINE

## NRT0123

Prepared: Ashley Alleway, Conor Mihell Approved: Sherri Smith

<b>Course Code: Title</b>	NRT0123: OUTDOOR NAVIGATION				
<b>Program Number: Name</b>	1120: COMMUNITY INTEGRATN				
<b>Department:</b>	C.I.C.E.				
<b>Semester/Term:</b>	17F				
<b>Course Description:</b>	Students 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). Students will use a navigational protractor, metric scale, and digital planimeter in the planning and presentation of field exercises. Pacing and distance measurement devices (50 m rope, 30 m tape, Hip-Chain) will be used to measure distances in a team environment. Calculations of distance, area and pacing factors will be covered.				
<b>Total Credits:</b>	3				
<b>Hours/Week:</b>	3				
<b>Total Hours:</b>	45				
<b>Essential Employability Skills (EES):</b>	<p>#1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.</p> <p>#2. Respond to written, spoken, or visual messages in a manner that ensures effective communication.</p> <p>#3. Execute mathematical operations accurately.</p> <p>#6. Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>#7. Analyze, evaluate, and apply relevant information from a variety of sources.</p> <p>#9. Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.</p> <p>#10. Manage the use of time and other resources to complete projects.</p> <p>#11. Take responsibility for ones own actions, decisions, and consequences.</p>				
<b>General Education Themes:</b>	Science and Technology				
<b>Course Evaluation:</b>	Passing Grade: 50%, D				
<b>Evaluation Process and Grading System:</b>	<table border="1"> <thead> <tr> <th>Evaluation Type</th> <th>Evaluation Weight</th> </tr> </thead> <tbody> <tr> <td>Assignments</td> <td>40%</td> </tr> </tbody> </table>	Evaluation Type	Evaluation Weight	Assignments	40%
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Quizzes	10%
Tests	50%

**Books and Required Resources:**

NTS 1:50 000 Topographic Map Sheets #41 K/9  
Outdoor Navigation Course Manual  
Publisher: Sault College

**Course Outcomes and Learning Objectives:**

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:

**Course Outcome 1.**

Be able to use a magnetic hand compass and navigate to a destination.

**Learning Objectives 1.**

- determine true and magnetic azimuths and convert from one to the other
- understand and set magnetic declination on a compass

**Course Outcome 2.**

Be able to determine distances by pacing and measuring distances using a 30 m or 50 m tape.

**Learning Objectives 2.**

- determine pacing factor and be able to pace distances in summer and winter
- be able to maintain and properly store equipment

**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.



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### **Learning Objectives 3.**

- understand scales of photographs and maps
- identify major features on aerial photographs and cover type changes
- be able to measure distances and directions on aerial photographs and maps
- be able to calculate directions on a map and aerial photograph using a navigational protractor

### **Course Outcome 4.**

Be able to use and understand the principles of Global Positioning Systems (GPS)

### **Learning Objectives 4.**

- understand the accuracy of GPS receivers (GPSr)
- be able to mark (enter) a field position in the GPSr while in the field
- be able to enter a field position using map co-ordinates
- be able to navigate to waypoints entered into the GPS using a compass and the GPSr
- be able to record positions from the GPSr onto a map

### **Course Outcome 5.**

Be able to determine areas on maps using a dot grid, the line transect method and computer software.

### **Learning Objectives 5.**

- understand how to use a dot grid for measuring areas
- know how to handle dots that fall on the area's boundary line
- be able to measure areas using a compass and the line transect method
- be able to measure area using computer software

### **Course Outcome 6.**

Use and interpret topographic maps (OBM, NTS). This includes being able to accurately



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reference any point using latitude/longitude as well as UTM co-ordinates.

### Learning Objectives 6.

- recognize the different ways of expressing scale
- identify all lines, numbers and symbols on maps
- recognize the divisions used on a map to measure long/lats and UTM co-ordinates
- draw topographic profiles, create digital topographic profiles and calculate gradients
- be able to read contour lines and determine elevations and major topographic features

### Course Outcome 7.

Use basic equipment including the metric scale, distance measurement devices, and navigational protractor.

### Learning Objectives 7.

- use the metric scale for distance measurements on a variety of maps with various scales
- measure directions and apply magnetic declination on maps using a navigational protractor
- properly use a distance measurement device.

#### 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:**





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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.



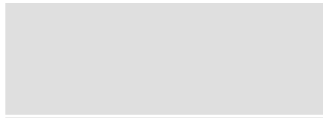
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**NOTE:** Due to the possibility of documented medical issues, CICE students may require alternate methods of evaluation to be able to acquire and demonstrate the modified learning outcomes

**Date:**

Wednesday, September 6, 2017



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