

## College of Wilderness Knowledge Course in Orienteering

Since ancient times, rough maps of the Earth and simple compasses have guided explorers, warriors, and pioneers like Lewis and Clark, Marco Polo, Christopher Columbus, and Amelia Earhart. Often, their skills with map and compass were all that kept these men and women from disaster. What has been a vital skill for humans for thousands of years is now a sport – orienteering.

By definition, orienteering is a cross-country race in which participants use a highly detailed map and a compass to navigate their way between checkpoints along an unfamiliar course.

### COURSE ORGANIZATION

Prior to the course, students will be provided a course agenda, course goal and objectives, list of required items to bring, and recommended prerequisites.

This course will be taught as 2 distinct lessons, typically Sat AM, Sat pm

This course is designed to run on Saturday. Generally, the course will start at **9:00 am** and be completed about 4:30 pm on Saturday. Lunch breaks will be 45-60 minutes. Sunday morning is possible for finishing one or two requirements.

The groups should also abide by the Outdoor Code: As an American, I will do my best to – **Be Clean** in my outdoor manners, **Be Careful** with fire, **Be Considerate** in the outdoors, and **Be conservation-minded**.

Participants are given worksheets on which to record answers and write reports on activities in which they participate.

The following lessons are included in the course:

- 1)** The instructor asks the students what orienteering is. Discuss map and compass vs. orienteering. Students write observations and answers on the worksheet.
- 2)** The instructor asks the students what type of injuries could occur while orienteering. They then discuss first aid for these injuries. The answers are recorded on their worksheets. Examples include cuts, scratches, blister, snakebite, insect stings, tick bites, heat and cold reactions (sunburn, heatstroke, heat exhaustion, hypothermia), and dehydration. The students are also asked why you should be able to identify poisonous plants and poisonous animals that are found in your area.
- 3)** Instructor, with the help of the students, sets up a 100-yard course. The students count their steps while walking the course. They also keep track of the time to walk the course. Then

the student's jog, at a sustainable pace, the 100 yards, counting their steps and keeping track of the time. They record these and calculate the distance traveled in each step. Explain why it might be important to know both walking and running pace as it relates to orienteering.

**4) The instructor:**

- a. Explains how a compass works. Describe the features of an orienteering compass and their uses
- b. Shows how to take a compass bearing and how to follow one.
- c. The students then write the answers on their worksheet. Then using the information, they demonstrate their knowledge by determining the heading of various landmarks determined by the instructor.

**5) The students divide into groups of 4-6. They then work as a team to complete short orienteering course using details of distance and compass headings. The course can be completed without a map using the compass skills learned above and their pace as learned earlier. Write a short report about the course and how your team might have improved their performance.**

**6) The instructor:**

- a. Explains how a topographic map shows terrain features. The students point out and name five major terrain features on a topographic map of Birch Bend camp.
- b. The students discuss what else is shown on a topographic map. They then point out and name 10 symbols on the topographic map of Birch Bend.
- c. The instructor shows another more detailed topographic map as an example of what is sometimes given at an orienteering event.

**7) The instructor asks the students to explain the meaning of declination. The instructor uses drawings to illustrate why there is declination. The instructor asks the students to explain why declination must be taken into consideration when using a map and compass together. The instructor uses a map of North America and vacation examples to help demonstrate the importance of declination, but also why it does not come up much in Minnesota.**

**8) Break for lunch**

**9) The instructor asks the students to orient the Birch Bend topographic map with magnetic north-south lines and a compass. The students then demonstrate how to measure distances on a map using an orienteering compass.**

**10) The instructor discusses different types of orienteering events and courses. The students then again break into groups of 4-6. Each group then completes an orienteering course keeping track of their times. Each group leaves at staggered times and uses the Birch Bend topographic map and a control sheet for marking their progress. Upon completion of the course, the students write a short report about the course, how they performed, and how they could improve their performance.**

**11)** The instructor hands out a list of common international control symbols and shows how they might apply to features on an orienteering or topographic map. The students then record and identify 20 international control description symbols on their worksheets and write the meaning of each symbol. The instructor then shows a control description sheet and explains the information provided.

**12)** The students discuss the following terms and tell when you would use them: attack point, collecting feature, aiming off, contouring, reading ahead, handrail, relocation, rough versus fine orienteering. The answers and comments are recorded on their worksheets.

**13)** The students divide into their groups of 4-6 again. Using the control symbols and maps of Birch Bend and control point stamps, each group designs an orienteering course. Either a cross country 2000-meter course, or a 12-control point, 60 minute, score orienteering course.

**14)** The groups exchange orienteering courses. Then the groups complete the course designed and run by the other group. Upon completion of the course, each student writes a short report on the course, their performance and how they could improve their performance on the worksheets. Assign course administrative roles to members of your group in running the course. Set up, timing, course judges etc.

**15)** Teach orienteering techniques to other members of your youth group. Show someone an orienteering compass, how it works, how to take a compass heading and how to orient a map. Teach or discuss what features and symbols might be found on a topographic map.

### **CLASS SIZE**

- The **ideal** class size is 10 - 15 students per course.
- The maximum class size is 25 students.
- There is **NO** minimum number of students for this course

### **PROFESSORS**

The following are Professors for the Orienteering course:

- Professor Darrell Charboneau
- Professor Bill Triplett
- Associate Professor
- Associate Professor Jean Keller

To join the staff, please contact one of the professors, or College Deans: Darrell Charboneau ([djcharboneau@aol.com](mailto:djcharboneau@aol.com)) or Jean Keller ([jeankellermn@gmail.com](mailto:jeankellermn@gmail.com)). Professors must be registered leaders or scouts and a registered counselor for this merit badge with the council. Anyone may be an assistant professor.

### **3.0 TARGET STUDENTS For Completing the BSA Merit Badge**

Scouts taking this Orienteering course shall have a minimum rank of Second Class or higher. Additionally, it is strongly recommended that the scouts have already completed their First Aid requirements of the First-Class rank.

***The merit badge can usually be accomplished in one weekend at Birch Bend. However, the scouts should be a little older and will need to be focused in order to complete the merit badge in one weekend. There is significant walking / hiking and some math calculations. The course will take all day (a fairly long day).***