The NJROTC
Area Six
Leadership Academy

Orienteering 201

“Beyond the Cadet Field Manual”
VI. Set a Course

OTM p.19

A well designed, correctly set course provides effective training.

A well designed, correctly set course is essential to host a fair, challenging meet.
A poorly designed or incorrectly set course hampers effective training, hurts morale, frustrates new orienteers.

A poorly designed or incorrectly set course makes the results of your meet unfair, and gives your unit a bad reputation.
When you design an orienteering course, three principles must be observed:

- The course must be **fair**.
- The course must demand **navigational skills**.
- The course must demand **physical effort**.
Otherwise, it’s something, but it ain’t orienteering

You must preserve the unique nature of the sport by making sure that your course is fair and that it requires navigation and physical effort.
Physical Effort

- It usually takes care of itself by the very nature of the sport.

- Provide water stations.

- Avoid setting controls in dangerous areas.

- Don’t tempt runners into becoming swimmers.
Adhere to course length guidelines.

Don’t get carried away making it too long “because the controls are too easy”.
- Adhere to course climb guidelines.

- Figure out how much climb they’ll experience, as this is a good measure of how tiring your course will be.
To ensure your meet is fair, you must eliminate luck
Luck creeps in when any of these situations exist

- Inaccurate map
- Controls not hung where shown on map
- Controls hung at wrong height
- One big problem
- The shape of the course
Inaccurate map

Your route choices depend on this!
What the map indicated

Controls not hung where shown
Controls not hung where shown
The controls must be hung at the right height!

- **Too high** – no navigational skill required; **too low** – it becomes a game of hide and seek

- **But** -- White course controls should be visible from a good distance. Beginners must not be discouraged!
A good rule of thumb is: if you have a really detailed map that lets you read your way right to the control point, it should be hung so you don’t see it until you actually reach that point.
In very open forest, don’t hang the control low, because the chance is very good that runners at the control will show others where it is. So it’s better to hang the control point high (or find a different spot) so it’s equally easy for all.
Don’t design a course with just one big problem. If a course is all easy legs and one hard leg, even a beginner could get lucky and beat an expert.
The shape of the course shouldn’t introduce luck

Two legs connected by an acute angle are called dog legs. Dog legs can introduce luck into the course.
A runner missing the control to the left has nothing to help lead her back to the control.

A runner missing the control to the right can (if lucky) see others leaving it, and be led back to the control.
This is easily solved by putting another control beyond the exit side 100 yards away.
• **Crossovers** introduce luck because some runners will take points out of order. Best to avoid unless you want to man all the controls and check runners’ cards.
• How would runners likely run this course?
• Probably like this
Navigational skills

- **Design** the course on your map.
- **Field check** the control point locations for suitability.
- **Revise** as necessary.
- Every control should be on a **distinct feature** that can be navigated to using the map and compass.
- Don’t play control point hide-and-seek.
- A detailed campus map with lots of small features provides plenty of map reading (that’s why it’s great for beginners).
- Be imaginative: vary leg length, direction, control features.
The legs are what your course is all about!
Provide meaningful route choices.
Vary the legs: difficulty, length, direction.
Every leg should have navigational challenges.
The White Course

- The future of your program depends on your 1st years.
- Those who get badly lost are likely to quit orienteering.
- Respect the guidelines laid down for White Course.
- Accurate map
- Lots of trails
All points on large, distinct features with handrails between – preferably trails
Controls highly visible, chest high
Easy start – 1\textsuperscript{st} control can even be visible from the Start
Short legs < 400m
Avoid dense areas of heavy vegetation
Compass use should not be needed to complete the course
The Yellow Course

- Easy start
- Easy course
- Variety of length of legs
The Yellow Course

- Still use handrails for legs, but points are off the handrails
- Attack points are on the handrails
- Good catching features beyond the control
- Large features
- Controls hung waist high
The Orange Course

- A little longer, a little harder than Yellow
- Controls hung knee high
- Attack points off handrails
- Catching features after control
- Features of medium difficulty
- Variety in
  - Control features
  - Direction
  - Route Choice
The Green Course

- Follow the course guidelines for number of controls, length of course
- Use complicated parts of the map
- Control feature should be seen before the control
- Control markers hung below the knee
- Make the orienteer navigate to the control
- For example, put the control on the North side of the knoll if the runner is coming from the South
The Score O Course

- Make sure you’re clear about point values
- Put it in your LOI
- Mention it during the instructor brief
- Show it on the map

Distance and Difficulty
- Be consistent
- Keep it simple
- Think about control placement – you don’t know what direction the runner will come from!
I. Get Ready

II. Know the Rules

III. Understand the Map

IV. Master the Control Codes

V. Make a Map

VI. Set a Course

VII. Run a Practice

VIII. Prepare for a Meet

IX. Use Course Strategy

X. Analyze Your Performance

XI. Host a Meet

XII. Keep Learning
VII. Run a Practice

- OTM p. 28
- When does your “season” start and end?
- How many practices per week
- How long per practice
- Conflicts with other ROTC teams
- Orienteering muster sheet
- Attendance and performance grades
- Warm up, cool down, hydrate!
- If your practice is off campus, bring water!
Theory and Application

- Each practice should have both
- Quick 5-15 minutes theory
- Get em outside
  - skill drills
  - run a course
  - endurance training
Begin at the beginning

Starting skills and knowledge

- **Compass use**
- **Distance estimation**
  - measuring distances on the map
  - pace counting
- **Map reading**
  - map symbols
    - 5 colors of the map
    - 5 landforms
  - margin information
  - Control codes
Skill drills

- Coaching Orienteering manual
- Beyond Armchair Orienteering
- Teaching Orienteering
Theory
- Map visualization
- How high?
- Total Climb
- Finding a good attack point
- Control Card Quiz
- Measuring Leg Distances
- Course Analysis
Map Visualization
How high?

- The contours in the following maps are 3 meters apart. For each drawing, determine the height of the highest hill pictured.
Total climb

• To get from A to B, how much will you **climb** if you follow the broken line? The contour interval is 3 meters.

• Count all the contours that require you to go **up**, and don’t worry about the ones that have you run down.
Either give them the codes, have them write out the description, or give them the description, have them fill in the codes.
Measuring leg distances
Course Analysis

- Give the **bearing and length** of each leg.
- Identify the **control feature** on which the control flag is located.
- Identify each **attack point** you would use.
- Describe your **route choice** for each leg.
Catching features

- Orienteering simulation
- Useful for demonstrating different techniques
- You can import OCAD maps into Catching Features, which will render them in 3D
Application

- Shadowing
- Silver dollar game
- Memory orienteering
- Permanent course orienteering
Set courses around your campus

- Before practice
- One cadet set
- One cadet vet – make sure they go separately!!
- Put your points where they won’t get swiped!
- Keep your course set for 2 consecutive practices
  - beat their time
  - run it backwards
  - Run it without the map
Shadowing
Silver dollar game

- You can do this on an orienteering map or simply go outside with a compass and a long tape measure.
- Sketch out a series of legs of equal length – something easy to compute, like 10 or 20 yds.
- Compass only, mass start.
- Everybody needs to know their pace!
Call out the bearing and distance
Everybody shoots the bearing and paces that distance
Call out next bearing and distance etc
The cadet who gets nearest the end point wins a silver dollar
Memory Orienteering

- They get a map of the 1st leg at the start
- Each subsequent leg is hanging from the control
- Best to laminate the map pieces
- This is a good way to force your cadets to distance estimate, take precise bearings, and observe the map closely as to notice the important features on the way to the next control (map simplification)
Permanent Course Orienteering
Other brilliant ideas

• Use **local orienteering clubs** frequent meets every chance you can

• Use **local races** as a way of maintaining or improving your orienteering team member’s speed and endurance
  – Partner with a local race organizer to allow cadets to run at no cost or reduced cost