



the smart software
for cartography

Getting Started with Course Setting in OCAD

About this Document

This document was produced for an OCAD Course Setting workshop.

It's an introduction to the course setting module of OCAD, but not a complete documentation of all course setting functions.

More information about OCAD Course Setting can be found in our highly recommended Wiki:

https://ocad.com/wiki/ocad/en/index.php?title=Course_Setting_for_Orienteering

For the handling of OCAD to draw maps, we point to the PDF *Getting Started with OCAD*, which is available in the **Help** menu in the OCAD program and to our other Tutorials (<https://ocad.com/wiki/ocad/en/index.php?title=Tutorials>).

Suggestions and complements are always welcomed: info@ocad.com

Baar, April 2023

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Table of Contents

1	About OCAD	5
1.1	OCAD Editions	5
1.2	OCAD User Interface.....	6
1.3	OCAD Help.....	7
1.4	OCAD Service Update	7
2	Course Setting Project	8
2.1	A) New Course Setting Project Wizard	8
2.2	B) Start a New Course Setting Project.....	8
2.3	Save the Course Setting Project	9
3	Open an Orienteering Map as a Background Map	10
4	Courses and Classes	11
4.1	Create a New Course	11
4.2	Create a New Class.....	12
5	Compose Course	13
5.1	Compose a new Course.....	13
5.2	Modify an existing course.....	13
5.3	Course Setting Objects Toolbar.....	14
6	Add Courses Objects (Controls etc.) on the Map	15
6.1	Start.....	15
6.2	Control	15
6.3	Finish.....	15
6.4	Marked Route.....	16
6.5	Course Title	17
6.6	Control Description.....	17
7	Edit Course Setting Objects	18
7.1	Delete Course Setting Objects.....	18
7.2	Move Course Setting Objects	18
7.3	Change Code	18
7.4	Cut a Control Circle.....	18
7.5	Edit Lines or Area (e.g. Marked Route or Out-Of-Bounds Area).....	19
8	Define and Edit Course	20
8.1	Define Course	20
8.2	Show Course Preview.....	20
8.3	Insert Course Setting Objects later.....	20
8.4	Delete Course Object from Courses.....	21
8.5	Edit Courses in the Preview Mode	21
9	Route Analyzer	23
10	Course Options	24
11	Colors and Symbols	25
11.1	Colors.....	25
11.2	Symbols.....	25
12	Print and Export	26

12.1	<i>Print Map and Courses</i>	26
12.2	<i>Export Map and Course as PDF</i>	27
12.3	<i>Print Control Descriptions</i>	28
12.4	<i>Course Setting Export for the Result Software</i>	28
12.5	<i>Export to Web Services</i>	29
12.6	<i>Canvas</i>	29
12.7	<i>Export to OCAD Sketch App</i>	30

1 About OCAD

1.1 OCAD Editions

OCAD Mapping Solution

OCAD Mapping Solution is the OCAD edition to create topographic maps, city maps, etc. The course setting functions are also included.

OCAD Orienteering

OCAD Orienteering is the OCAD edition to draw orienteering maps. The course setting functions are also included.

OCAD Starter

OCAD Starter is the OCAD edition to draw maps, but with reduced functions. The course setting functions are also included.

OCAD Course Setting

OCAD Course Setting is the OCAD edition for course setters. In the edition are the complete course setting functions, but no function to draw or edit orienteering maps.

OCAD Sketch App

App that runs on Android and iOS devices for digital mobile mapping in the terrain. Free for download and use.

OCAD Trial

OCAD can be downloaded as a 14-day trial version. The desired edition can be chosen. However, OCAD Trial has limited Course Setting functions.

OCAD Viewer

OCAD Viewer is a free OCAD edition to view, print and export OCAD maps as well as OCAD course setting projects. No editing of maps and courses is permitted.

Conclusion:

- If you only need to set courses, the Course Setting Edition is the best choice.
- If you would also like to edit the map, an OCAD Orienteering or OCAD Starter edition is needed. The OCAD Mapping Solution is not needed for orienteering sport purposes.

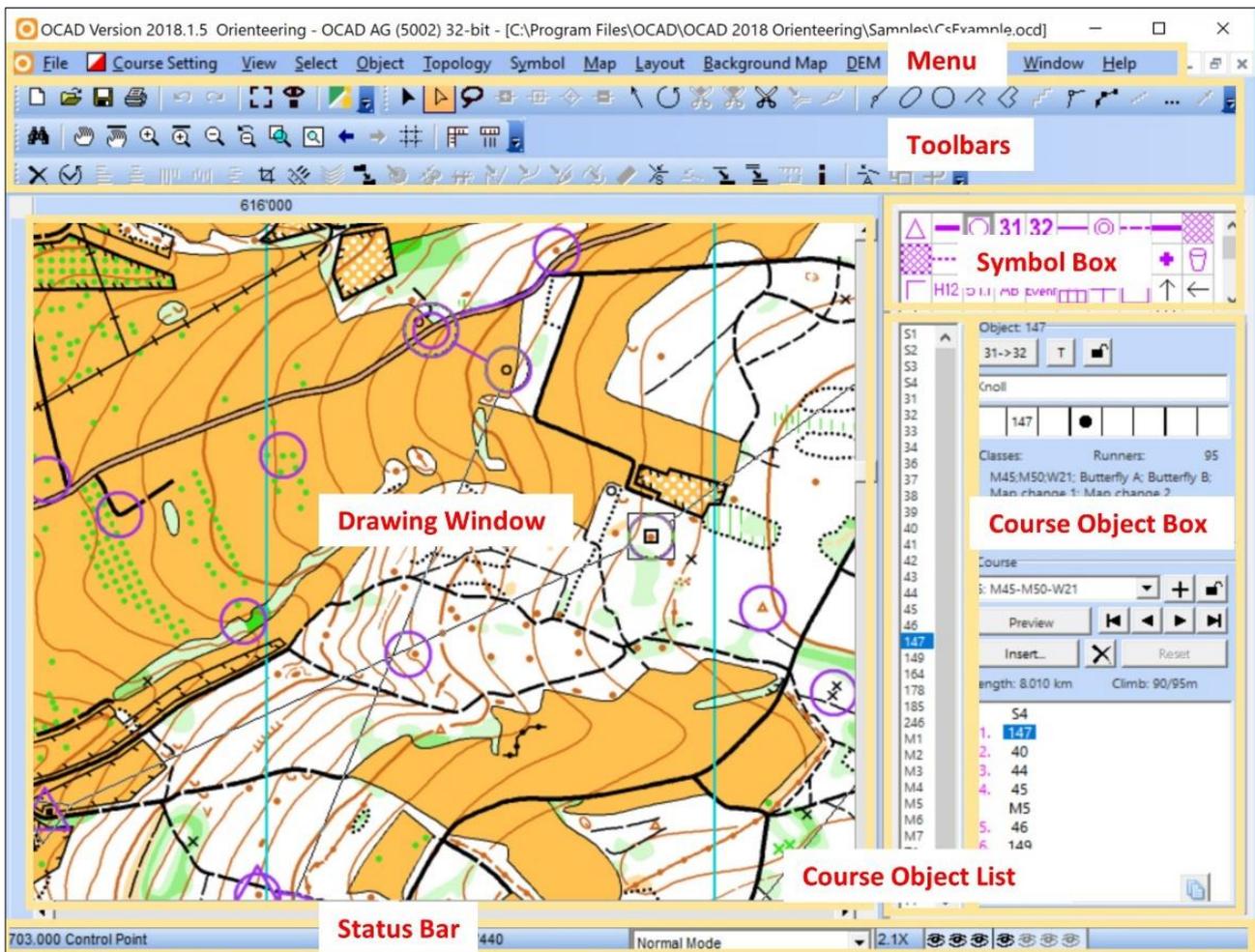
Single User license vs Team license

An OCAD license can be purchased as a Single User or Team license:

- Users of Single User licenses can activate OCAD on multiple devices of their own (e.g., desktop, notebook, tablet).
- Team license users can activate the license on only one device at a time, but can independently, quickly and easily transfer the license to another person.

 *More information about the different OCAD editions and license models is available at:*
<https://www.ocad.com/en/#editions>

1.2 OCAD User Interface



The toolbars can be advanced on the left edge and adjusted on the right edge. In addition, toolbars can be shown and hidden under Menu **Options** > **OCAD Preferences**.



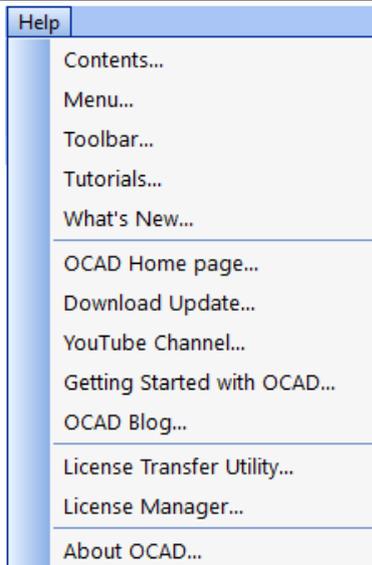
1.3 OCAD Help

In the **Help** menu you will find various links to further help in dealing with OCAD, such as Tutorials.

In the **License Transfer Utility** you can transfer your license to another person or another device.

The **License Manager** shows an overview of the OCAD licenses, and their activations assigned to your organization (company, club, association).

In **About OCAD** you can find your license information incl. expiration date and your current version of OCAD.



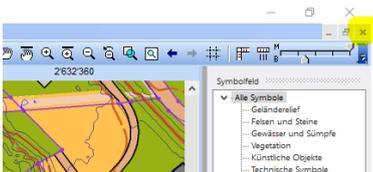
1.4 OCAD Service Update

The service updates correct minor problems and add the latest cartography tools and enhancements to your OCAD. It is strongly recommended to keep your OCAD up to date and install the newest Service Update.

Click on the **Download Update** function in the **Help** menu to download it.



All open OCAD files must be closed before installing the OCAD Update.



2 Course Setting Project

For a Course Setting Project, you need two OCAD files:

1. A [Course Setting File]

This is the file where you manage your Course Setting Project, set courses and load a Background Map.

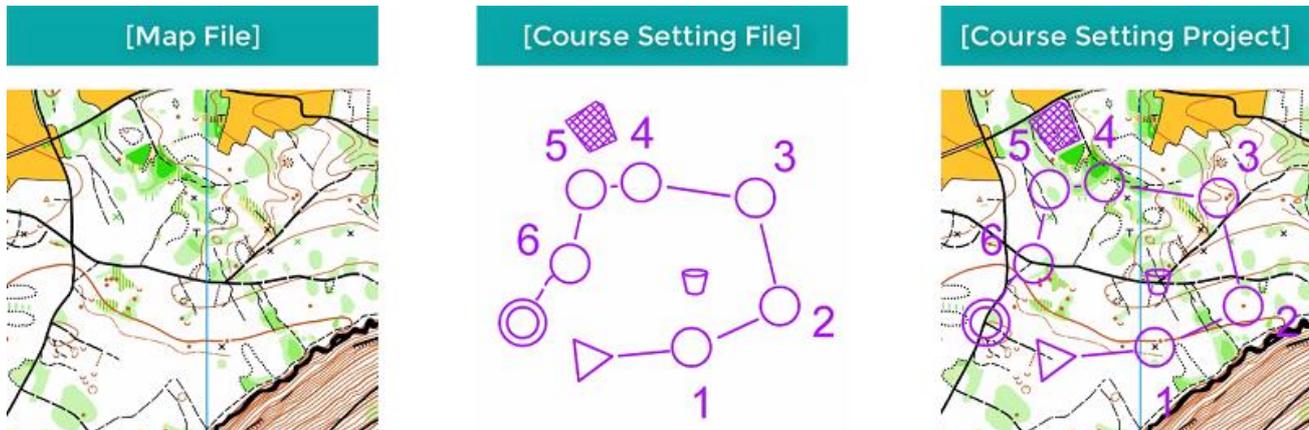
Like map files it has the extension *.ocd*, but it has a special internal mark to identify it as a course setting file.

2. A [Map File]

This is your OCAD map which will be loaded as a Background Map in your [Course Setting File].



It is best practice to save the [Course Setting File] and the [Map File] in the same folder.



You have two options to start a new [Course Setting Project].

2.1 A) New Course Setting Project Wizard

<p>Choose this command from the File menu to create a new course setting project.</p>	
<p>This wizard guides you through the first steps like setting an event title and loading a map file in the background layer.</p>	

2.2 B) Start a New Course Setting Project

<p>To start a New Course Setting Project, you must create a new [Course Setting File]. Menu File > New...</p>	
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Dialog *New File*

Map type: ***Course setting project for orienteering***



In the OCAD Course Setting edition there is no other map type. The map type is always *Course setting project for orienteering*.

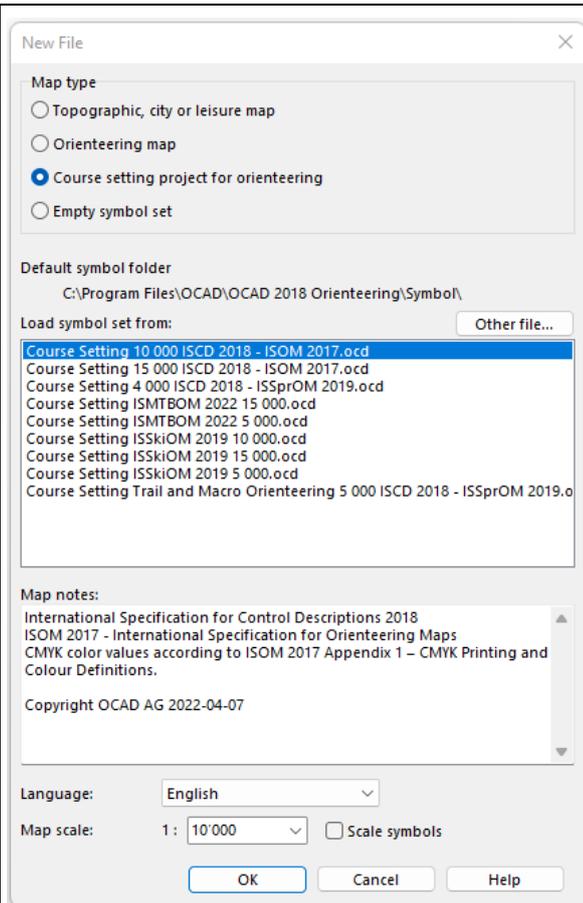
Load symbol set from:

Load the symbol set that corresponds to the scale of your [Map File].

In this example, we like to set courses on a 1:10'000 map:

-> ***Course setting 10 000 ISCD 2018 – ISOM 2017***

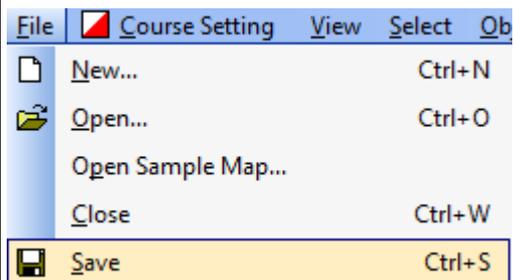
-> ***OK***

**2.3 Save the Course Setting Project**

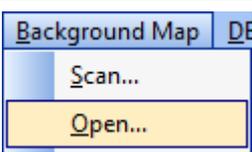
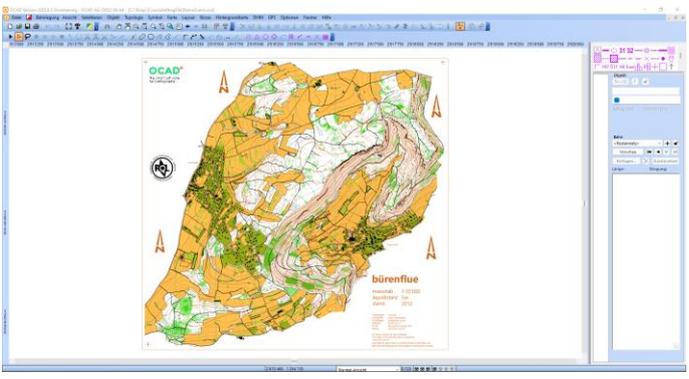
Menu ***File > Save***

Dialog *Save As:*

Save the Course Setting project.



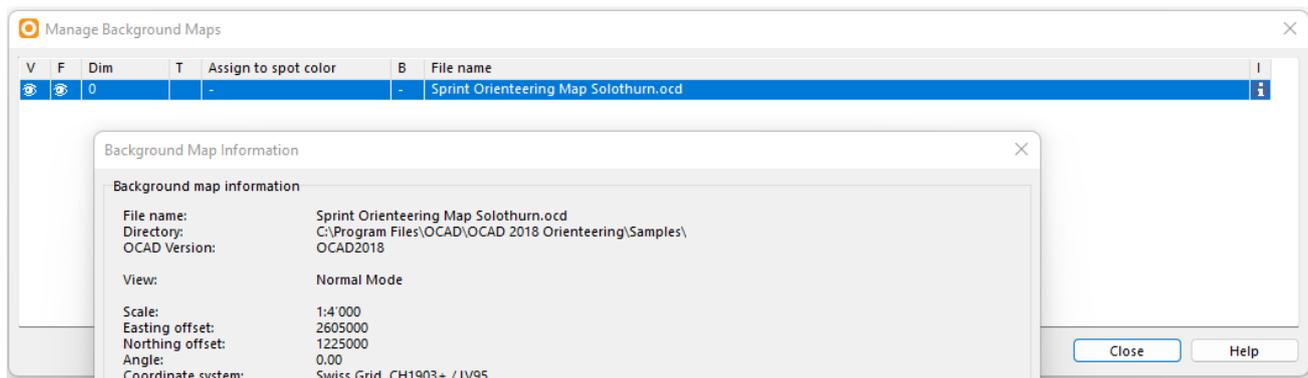
3 Open an Orienteering Map as a Background Map

<p>Menu Background Map > Open...</p> <p>The Open Background map dialog appears. Choose your [Map File], which is normally an .ocd file. ->Open</p>	
<p>Menu View > Show Entire Map</p> <p>The whole map is now displayed in the drawing area.</p>	

 When a georeferenced orienteering map is opened as a background map, the coordinates will be used for the course setting project. **Working georeferenced is highly recommended**, as some functions require georeferencing, such as *Upload to LiveloX*, *Upload to SPORTident Center*, or exporting data to the *OCAD Sketch App*.

 Also make sure that the symbol set of your background map is up to date if you use the Route Analyzer. Otherwise, errors may occur during route finding.

 To see information to the loaded background map, click on the **Info** button in the last column of the **Manage Background Maps** dialog in the **Background Map** menu.



V	F	Dim	T	Assign to spot color	B	File name
		0		-	-	Sprint Orienteering Map Solothurn.ocd

Background map information	
File name:	Sprint Orienteering Map Solothurn.ocd
Directory:	C:\Program Files\OCAD\OCAD 2018 Orienteering\Samples\
OCAD Version:	OCAD2018
View:	Normal Mode
Scale:	1:4'000
Easting offset:	2605000
Northing offset:	1225000
Angle:	0.00
Coordinate system:	Swiss Grid CH1903+ / LV95

 Encrypted OCAD files (**.eocd**) or raster files (**.bmp**, **.tif**, **.jpg**, **.gif**, **.png**) can also be used as background maps for Course Setting.

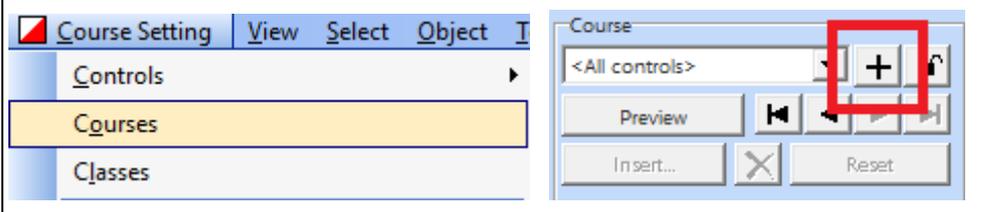
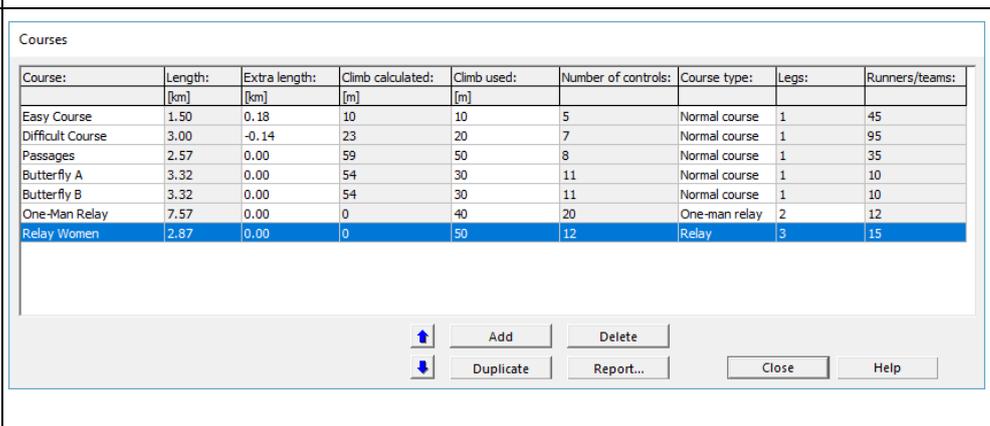
4 Courses and Classes

In OCAD you can either work with courses only or you can use classes and courses. Different classes may use the same course, e.g., course A -> class W18, W16, M16; course B -> class W14, M14, Open Short.

If you have two classes (e.g., *Women Elite* and *Women 20*) and both have the same course, it is a common mistake to name the course *WE*, *W20* and not to create any Classes. You will get troubles with your timing software this way.

Instead, you can still name the course *WE*, *W20* (or simple name it *A*), but you need to create two classes (*WE* and *W20*) and allocate the same course to both.

4.1 Create a New Course

<p>Menu Course Setting > Courses or just click on Add in the Course box.</p>																																																																									
<p>Dialog Courses</p> <p>-> Click the Add button to create a new course</p> <p>-> Enter a Course name in the first column</p> <p>-> Define the Course type</p> <p>-> OK</p>	 <table border="1" data-bbox="486 840 1444 1019"> <thead> <tr> <th>Course:</th> <th>Length: [km]</th> <th>Extra length: [km]</th> <th>Climb calculated: [m]</th> <th>Climb used: [m]</th> <th>Number of controls:</th> <th>Course type:</th> <th>Legs:</th> <th>Runners/teams:</th> </tr> </thead> <tbody> <tr> <td>Easy Course</td> <td>1.50</td> <td>0.18</td> <td>10</td> <td>10</td> <td>5</td> <td>Normal course</td> <td>1</td> <td>45</td> </tr> <tr> <td>Difficult Course</td> <td>3.00</td> <td>-0.14</td> <td>23</td> <td>20</td> <td>7</td> <td>Normal course</td> <td>1</td> <td>95</td> </tr> <tr> <td>Passages</td> <td>2.57</td> <td>0.00</td> <td>59</td> <td>50</td> <td>8</td> <td>Normal course</td> <td>1</td> <td>35</td> </tr> <tr> <td>Butterfly A</td> <td>3.32</td> <td>0.00</td> <td>54</td> <td>30</td> <td>11</td> <td>Normal course</td> <td>1</td> <td>10</td> </tr> <tr> <td>Butterfly B</td> <td>3.32</td> <td>0.00</td> <td>54</td> <td>30</td> <td>11</td> <td>Normal course</td> <td>1</td> <td>10</td> </tr> <tr> <td>One-Man Relay</td> <td>7.57</td> <td>0.00</td> <td>0</td> <td>40</td> <td>20</td> <td>One-man relay</td> <td>2</td> <td>12</td> </tr> <tr> <td>Relay Women</td> <td>2.87</td> <td>0.00</td> <td>0</td> <td>50</td> <td>12</td> <td>Relay</td> <td>3</td> <td>15</td> </tr> </tbody> </table>	Course:	Length: [km]	Extra length: [km]	Climb calculated: [m]	Climb used: [m]	Number of controls:	Course type:	Legs:	Runners/teams:	Easy Course	1.50	0.18	10	10	5	Normal course	1	45	Difficult Course	3.00	-0.14	23	20	7	Normal course	1	95	Passages	2.57	0.00	59	50	8	Normal course	1	35	Butterfly A	3.32	0.00	54	30	11	Normal course	1	10	Butterfly B	3.32	0.00	54	30	11	Normal course	1	10	One-Man Relay	7.57	0.00	0	40	20	One-man relay	2	12	Relay Women	2.87	0.00	0	50	12	Relay	3	15
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If every class has its own course, it is easier to name the course like the class name.



The course and class name shouldn't contain any other special sign, except the underline character otherwise there can be problems with the transfer of the course data in the result software.

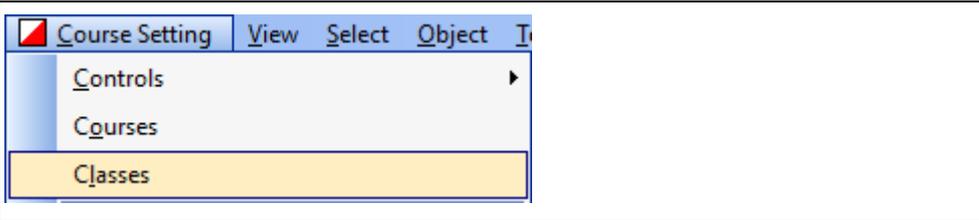
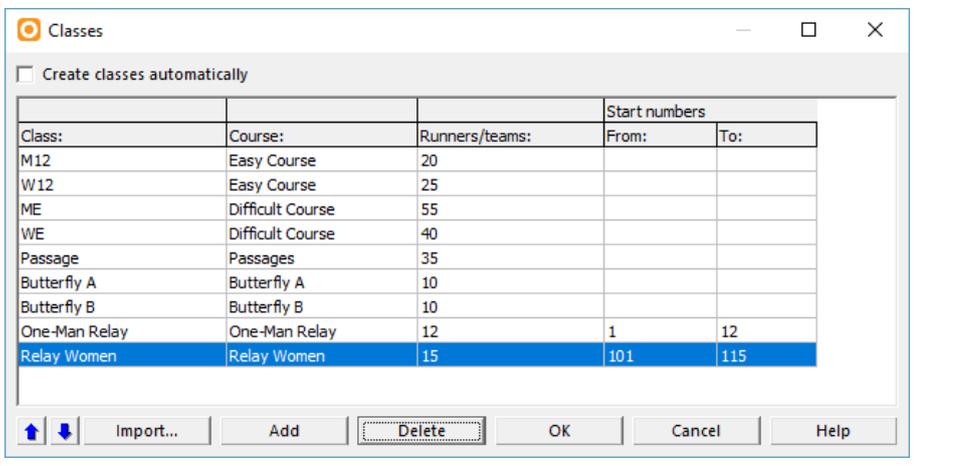


Later – when the course is set – information like the additional length and the climb can be inserted.



When many and similar courses must be set it is recommended to duplicate the existing course and modify it.

4.2 Create a New Class

<p>Menu Course Setting > Classes</p>																																																					
<p>Dialog Classes</p> <p>->Click the Add button to create a new class</p> <p>-> Enter a name in the Class column</p> <p>-> Assign a course</p> <p>-> OK</p>	 <table border="1" data-bbox="496 562 1385 869"> <thead> <tr> <th rowspan="2">Class:</th> <th rowspan="2">Course:</th> <th rowspan="2">Runners/teams:</th> <th colspan="2">Start numbers</th> </tr> <tr> <th>From:</th> <th>To:</th> </tr> </thead> <tbody> <tr> <td>M12</td> <td>Easy Course</td> <td>20</td> <td></td> <td></td> </tr> <tr> <td>W12</td> <td>Easy Course</td> <td>25</td> <td></td> <td></td> </tr> <tr> <td>ME</td> <td>Difficult Course</td> <td>55</td> <td></td> <td></td> </tr> <tr> <td>WE</td> <td>Difficult Course</td> <td>40</td> <td></td> <td></td> </tr> <tr> <td>Passage</td> <td>Passages</td> <td>35</td> <td></td> <td></td> </tr> <tr> <td>Butterfly A</td> <td>Butterfly A</td> <td>10</td> <td></td> <td></td> </tr> <tr> <td>Butterfly B</td> <td>Butterfly B</td> <td>10</td> <td></td> <td></td> </tr> <tr> <td>One-Man Relay</td> <td>One-Man Relay</td> <td>12</td> <td>1</td> <td>12</td> </tr> <tr> <td>Relay Women</td> <td>Relay Women</td> <td>15</td> <td>101</td> <td>115</td> </tr> </tbody> </table>	Class:	Course:	Runners/teams:	Start numbers		From:	To:	M12	Easy Course	20			W12	Easy Course	25			ME	Difficult Course	55			WE	Difficult Course	40			Passage	Passages	35			Butterfly A	Butterfly A	10			Butterfly B	Butterfly B	10			One-Man Relay	One-Man Relay	12	1	12	Relay Women	Relay Women	15	101	115
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 If every class has its own course, choose the option **Create classes automatically** in the dialog.

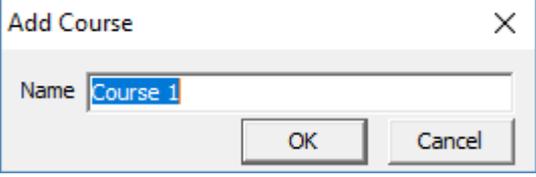
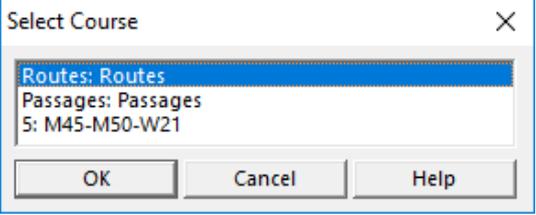
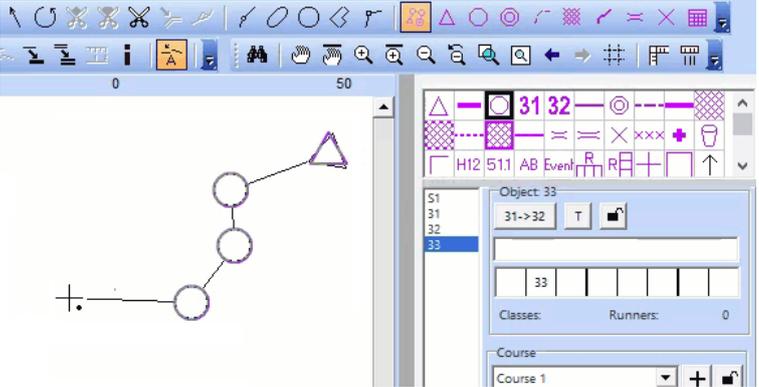
 Optionally, you can define the estimated number of runners and the start number range allocated to this class. This number of runners is used for the course statistics.

5 Compose Course

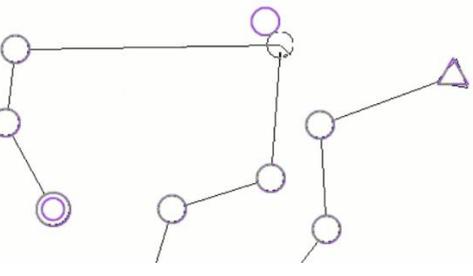
The **Compose Course** tool is a very easy and intuitive tool to set and edit courses.

The following chapters **Add Courses Objects (Controls etc.) on the Map** and **Define and Edit Course** go deeper into Course Setting.

5.1 Compose a new Course

<p>Choose the Compose course tool from the toolbar.</p>	
<p>When you click on the Compose course tool, but no course has been defined so far, OCAD will add a course automatically. Enter the name and click OK.</p>	
<p>If there are already courses defined, but you have not chosen one in the course list, a window appears where you can select a course.</p>	
<p>Compose the course by clicking in the drawing area. First click adds a start object, each additional click adds a control point and double click adds a finish object to the map and the course.</p>	

5.2 Modify an existing course

<p>Insert controls into the course</p> <ul style="list-style-type: none"> - Choose the Compose course tool from the toolbar. - Initialize the Insert mode by entering and leaving a control circle with the mouse. - Once the insert mode is initialized each click inserts a control point. - Use <i>ESC</i> key to exit the insert mode. 	
<p>Remove controls from the course</p> <p>Use <i>CTRL</i> key + <i>Click</i> on a control to remove a control from the course.</p>	
<p>Move a control point</p> <ul style="list-style-type: none"> - Enter a control circle with the mouse. 	

- Press the left mouse key and drag the control point to the new position
- Leave the left mouse key. Press *ESC* key to exit the insert mode.

Limitations

The Compose course tool is not working for variations in Relay Courses.

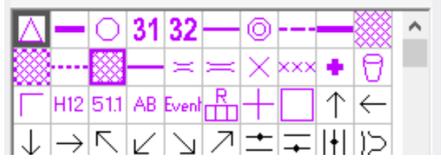
5.3 Course Setting Objects Toolbar

Beside the Compose course tool, there are the most common Course Setting Symbols in the toolbar. Click on one of them and a Drawing Mode is activated automatically.

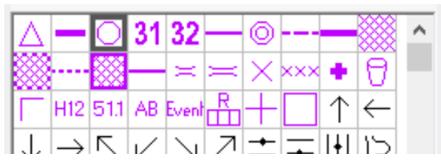
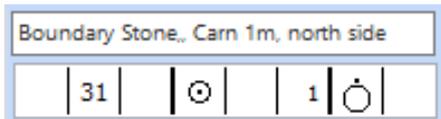


6 Add Courses Objects (Controls etc.) on the Map

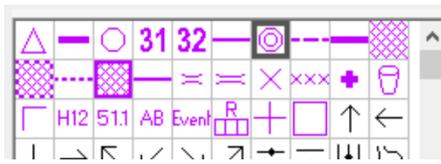
6.1 Start

Select the Start symbol on the left hand in the symbol box.	
Select any drawing mode in the toolbar.	
Click in the drawing area to place the object on the map.	
The dialog Course Object appears. The suggested <i>Code</i> is S1. If required you can enter a different code (e.g., S2) -> OK	
In the course setting box, you can enter the text and/or symbolic control description.	

6.2 Control

Select the Control symbol in the symbol box.	
Select a drawing mode and place the object on the map.	
The Course Object dialog appears. The suggested <i>Code</i> is a number (e.g., 31). If required you can enter a different code. -> OK	
In the course setting box, you can enter the text and/or symbolic control description.	

6.3 Finish

Select the Finish symbol in the symbol box.	
--	--

Select a drawing mode and place the finish object on the map.

The **Course Object** dialog appears. The suggested *Code* is F1. If required you can enter a different code.

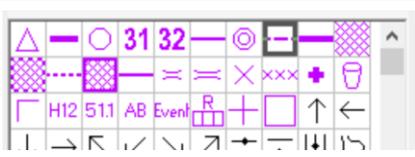
-> **OK**



For the finish it isn't possible to define a control description. The description of the route to the finish is inserted as a marked route from the last control to the finish.

6.4 Marked Route

Select the **Marked Route** symbol in the symbol box.



Select any drawing mode in the toolbar.



Draw the marked route in the running direction on the map.

The **Course Object** dialog appears. The suggested *Code* is M1. If required you can enter a different code.

-> **OK**



Text Control Description

Insert a text control description box of the marked route in the course setting.

 Use a semicolon as place holder for the distance to the finish.

E.g.,

This is illustrated in the text control description:

- 5. 46 Earth wall, west end
- 6. 149 Special item, northwest side
- 100m to finish

Symbolic Control Description

Here you can check or uncheck the **Funnel tapes**:

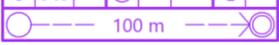
Funnel tapes ->

5	46	+++			┌
6	149	○			○



Funnel tapes ->

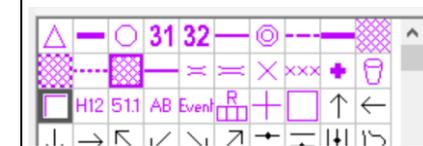
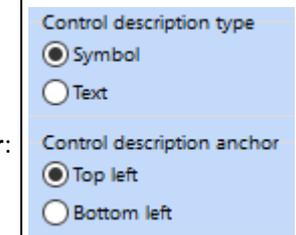
5	46	+++			┌
6	149	○			○



6.5 Course Title

Select the Course Title symbol in the symbol box.	
Select a drawing mode and place the object on the map.	
<p>The Course Object dialog appears. The suggested <i>Code</i> is N1. If required you can enter a different code.</p> <p>-> OK</p>	
The object is shown on the map with the text "course". This text is replaced in the course preview, when printing and exporting with the name of the course.	

6.6 Control Description

Select the Course Title symbol in the symbol box.	
Select a drawing mode and place the object on the map.	
<p>The Course Object dialog appears. The suggested <i>Code</i> is D1. If required you can enter a different code.</p> <p>-> OK</p>	
<p>Choose in the course setting box the control description type: Symbol or Text</p> <p>Choose in the course setting box the control description anchor: Top left or Bottom left</p>	

7 Edit Course Setting Objects

7.1 Delete Course Setting Objects

Select the **Select and Edit Object(s)** icon in the toolbar.

Click on the object on the map.

Press the *Delete* key or click the button .

 You can delete a course setting object only if it is not used in any course.



7.2 Move Course Setting Objects

Select the **Select and Edit Object(s)** icon in the toolbar.

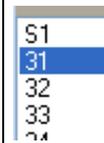
Click on the object on the map and move it with the pressed left mouse button to the new position. Release the mouse button.

 **Don't forget to update the changed control description!**



7.3 Change Code

Choose the course setting object in the list of course setting objects.



-> **Change code...**

31->32

Enter a new unused code.

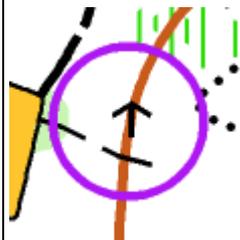


7.4 Cut a Control Circle

Select the **Select and Edit Object(s)** icon in the toolbar.



Click on the control on the map.

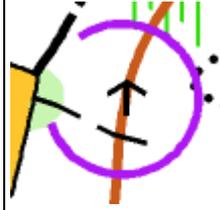


Select the **Cut** icon in the toolbar.



Click where the gap starts and move it with the pressed left mouse button to the end of the gap. Release the left mouse button.

 To close an already cut control circle, choose the **Cut** tool and click once in the gap.



7.5 Edit Lines or Area (e.g., Marked Route or Out-Of-Bounds Area)

Select the **Select Objects and Edit Vertex** icon in the toolbar.

Click on the line or area object.

Move a vertex with the pressed left mouse button.

Add vertex to an existing object:

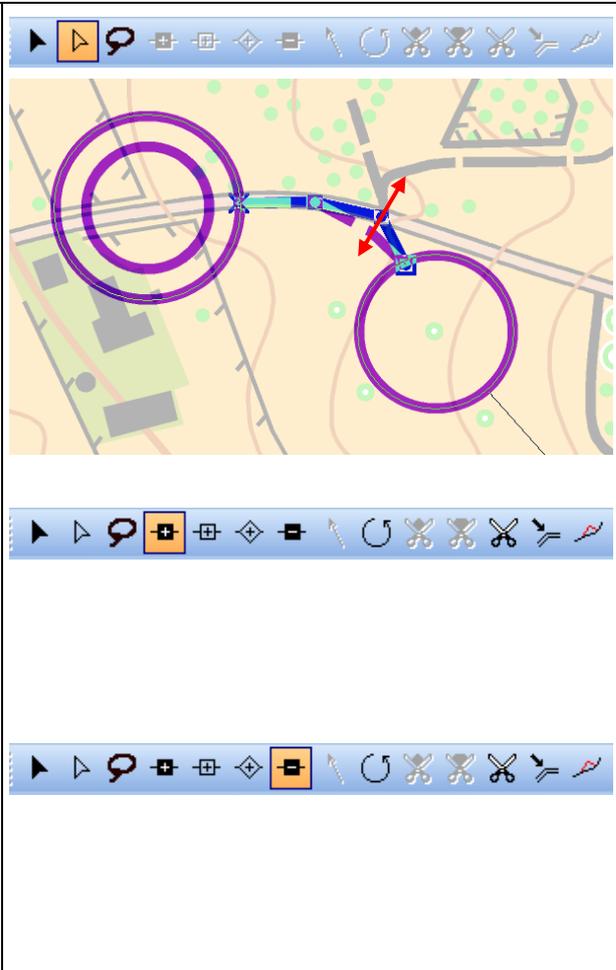
Select the **Normal Vertex** icon in the toolbar and click on the favored position in the object to set a new vertex.

 Instead of selecting the **Normal Vertex** icon, you can press the **SHIFT** and **CTRL** key simultaneously and click with the left mouse button.

If there are too many vertexes:

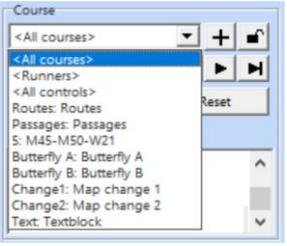
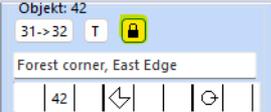
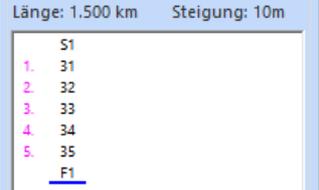
Select the **Remove Vertex** icon in the toolbar and click on the vertex, that you want to delete.

 Instead of selecting the **Remove Vertex** icon, you can press the **CTRL** key and click with the left mouse button on a vertex.

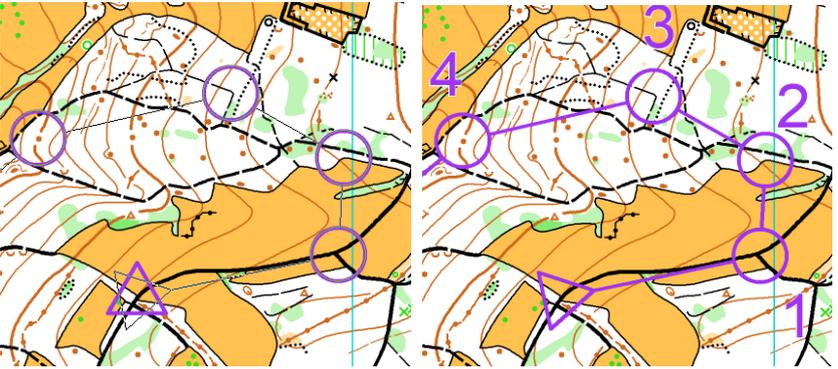


8 Define and Edit Course

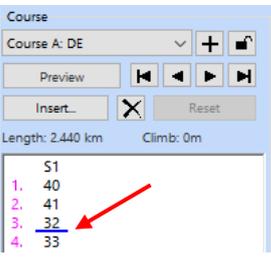
8.1 Define Course

<p>Choose a course in the course setting box.</p>	
<p>Add the Start, Controls, Marked Route(s) and Finish to the course in the favored order. There are two possibilities:</p> <p>A) Double click on the course setting object in the list of course setting objects</p> <p>B) Double click on the course setting object on the map</p> <p> Lock the position of the course setting objects beforehand so that you do not accidentally move their position when double-clicking.</p>	<p>List of course setting objects:</p> <ul style="list-style-type: none"> S1 31 32 33 M1 Z1 
<p>After adding a course setting objects the length of the course is updated.</p> <p> Start, finish and marked routes must be added separately to each course.</p> <p> You can also use the Insert Course Object into Courses function in the Course Setting menu.</p>	

8.2 Show Course Preview

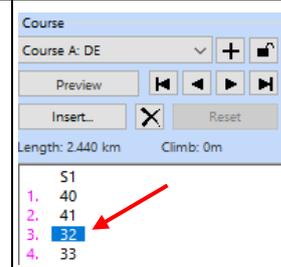
<p>Click on the Preview  button in the course setting box to show the course preview.</p> <p> In the Preview Mode various functions of OCAD are inactive!</p>	
--	--

8.3 Insert Course Setting Objects later

<p>Click on the correct position in the course, where the course setting object should be insert.</p> <p>A horizontal blue line shows where the course setting object will be inserted.</p>	
<p>To insert the course setting object double click on the course setting object in the object list or on the map.</p>	

8.4 Delete Course Object from Courses

Click on the code, that should be deleted. The number is marked blue.
Press the **DELETE** key to delete the course setting object from the list of course setting objects.



8.5 Edit Courses in the Preview Mode

 The below-mentioned steps can only be done in the preview mode.

8.5.1 Move Control Numbers

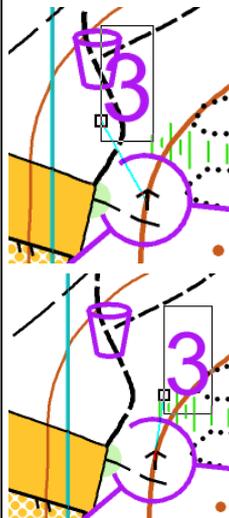
Select the **Select and Edit Object(s)** icon in the toolbar.



Click on the control number.
Click on the little square in the left bottom with the mouse, press the left mouse button and move the control number in the desired place. Release the mouse button.

 The movement is only for the currently in the preview mode shown course, unless you use the function **Move Control Number for all courses**.

 When you move the control number there is a thin light blue connecting line between the control circle and the control number.



8.5.2 Cut the Connecting Line

Select the **Select Objects and Edit Vertex** icon in the toolbar.



Click on the connecting line.



Select the **Cut** icon in the toolbar.

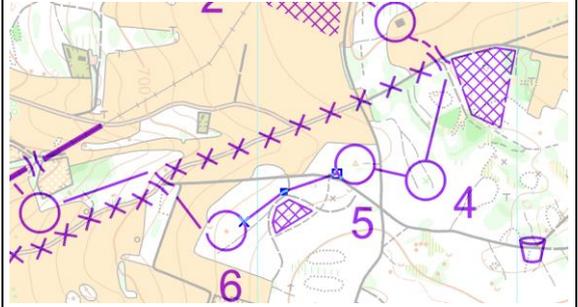


Click where the gap starts on the connecting line and move the cursor with the pressed left mouse button to the end of the gap

 The gap is only for the chosen course. Use the function **Edit Connecting Line for all Courses** to cut all courses.



Connection Lines can also be adjusted by inserting vertices and moving them, or by moving the start or end point of the Connection Line.

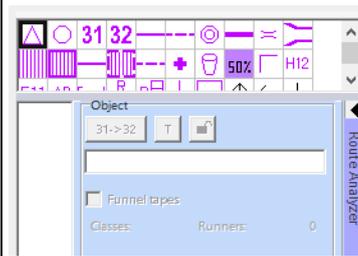


9 Route Analyzer

The Route Analyzer helps you to see and evaluate possible route choices between two controls.

If you are in a Course Setting project, you will see a purple bar on the right side called **Route Analyzer**. Click on it and the bar will open.

 The Route Analyzer is available in course setting projects for sprint orienteering maps, ski orienteering maps and mountain bike orienteering maps.



Click on the icon **Draw leg and analyze route**.

Click and drag a line in the OCAD window. You can analyze routes between any two points or between two controls.

 When you run the Route Analyzer for the first time, the function will need some time to process all necessary steps to show possible routes.

The shortest option is displayed with a solid blue line. The distance of the route is also shown with a text object. The route length text object will be updated if the route is modified manually.

Alternative routes are shown in red color.



Click on **Add route via point(s)**.

Touch an existing route on the map and release where the new route should pass. The route is calculated again.

Insert multiple via points by pressing the SHIFT key.

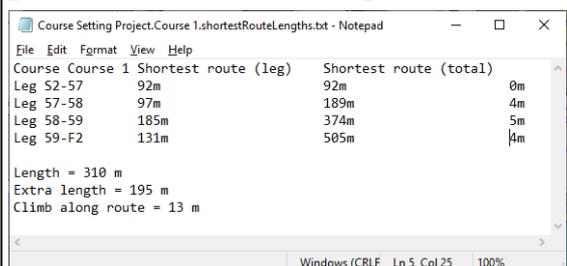
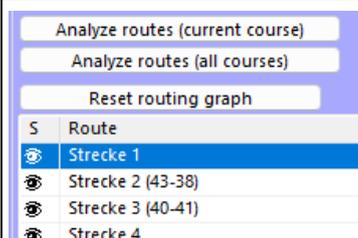


The calculated routes are listed in the route box. You can rename, hide or delete them.

Select **Analyze routes** to analyze the routes of the current course or all courses.

This will create a .txt file in the same folder where your course setting project is saved. This file contains information on all routes and course lengths.

 For sprint orienteering courses, it is common to specify the length of the ideal route and not the course length. Insert the value **Extra Length** in the corresponding field in the menu **Course Setting > Courses**.



 More information about the Route Analyzer:
https://www.ocad.com/wiki/ocad/en/index.php?title=Route_Analyzer

10 Course Options

Menu **Course Setting > Options...**

The **Course Options** dialog appears:

Course Options

Titles

Event title:

Course title:

Classes

Course name and classes

Course name only

Control description

Thicker horizontal line: ?

Maximum length: Rows ?

Number of start ?

Control descriptions on the map

Box size: mm ?

White background ?

Draw white background even in draft mode

Add control descriptions for all controls ?

XML export

Export course relay combinations (not IOF 2.0.3 standard)

One-man relay

Continuous control numbering

Controls

Numbering

Number ?

Number and code

Code only

Distance from circle to number: mm ?

Full stop after control number ?

White outline on control number

Connection lines

Distance from circle to connection line: mm ?

OK Cancel Help

Here various options can be changed.

? Graphical Help

The various options are explained with graphical help. Click on the question mark **?** on the right-hand side of the options.

11 Colors and Symbols

11.1 Colors

In the **Colors** dialog in the **Map** menu, you can manage the colors of the symbols. You shouldn't change something in the list if you don't know what you are doing.

The order of the colors in the color list regulates the overlaying: when printing a color covers all the colors that are listed below.

The actual ISOM Symbol Sets of OCAD contain the latest CMYK color value. However, they may change from time to time. The latest CMYK color values can be found under <https://orienteering.org/resources/mapping/>

No.	Name	Cyan	Magenta	Yellow	Black	Ov.	Opacity	Symbols	Map
54	Purple for course layout	35	85	0	0		100	✓	
55	White for course layout	0	0	0	0		100	✓	
1	All printing colors	100	100	100	100		100		
50	Upper purple for course planning	35	85	0	0		100	✓	
9	White - railway	0	0	0	0		100		
2	Black	0	0	0	100	✓	100		
4	Blue - point symbols	100	0	0	0		100		
5	Brown - point symbols	0	56	100	18		100		
6	Green - point symbols	76	0	91	0		100		
14	Blue - line symbols	100	0	0	0		100		
13	Dark green	100	0	80	30		100		
15	Brown - line symbols	0	56	100	18		100		
52	Lower purple for course planning	35	85	0	0		100	✓	
51	White for course planning	0	0	0	0		100		
7	Black - street middleline	0	0	0	100	✓	100		
8	Brown 50% - street infill	0	28	50	9		100		
10	Black - street sideline	0	0	0	100	✓	100		

11.2 Symbols

The latest symbol set for Course Setting is **ISCD 2018 – ISOM 2017** for forest maps and **ISCD 2018 – ISprOM 2019** for sprint maps (ISCD = International Specification for Control Descriptions). (02.2023)

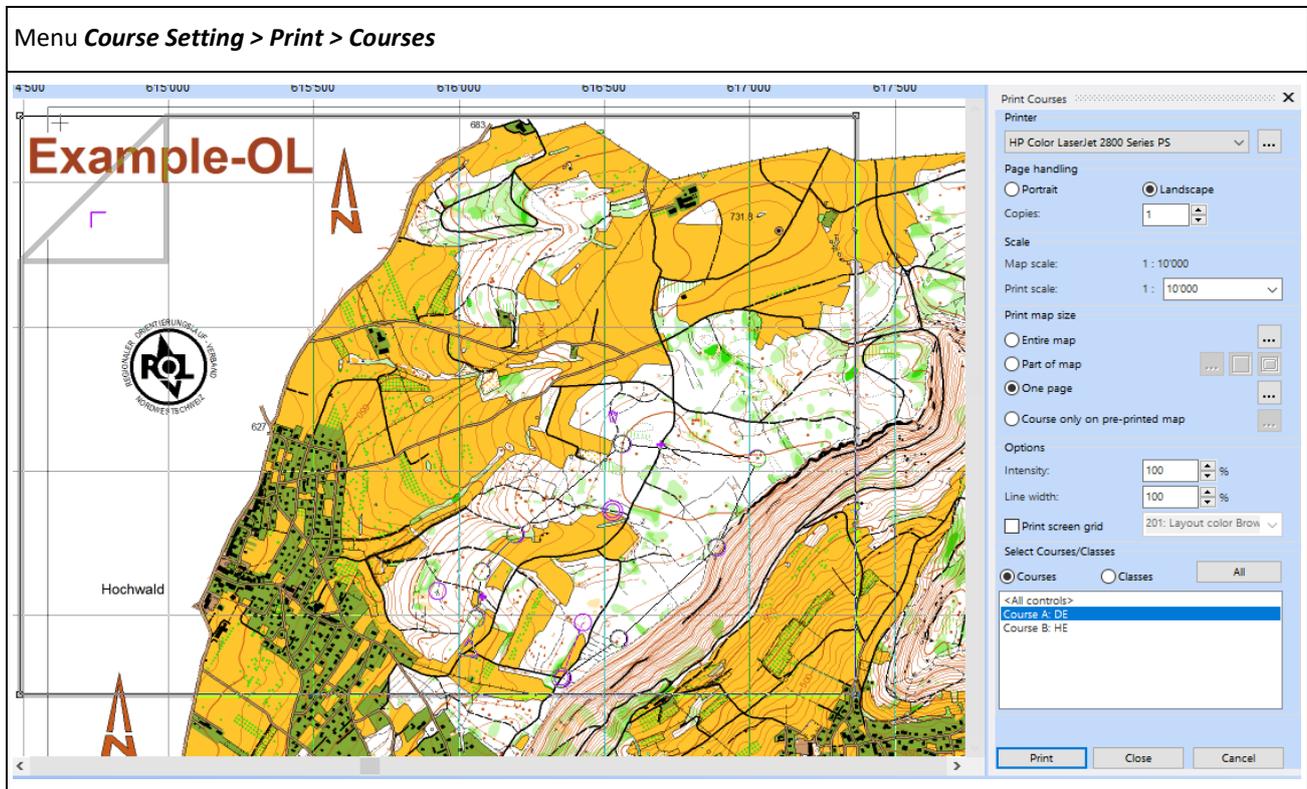
The symbol sets are also delivered for Ski and Bike orienteering.

12 Print and Export

12.1 Print Map and Courses



Due to color display, we recommend you to always create a PDF first out of OCAD and print this PDF afterwards, e.g., in Adobe Acrobat Reader.



Printer: Choose printer and set options like the highest print quality

Page handling: Set *Portrait* or *Landscape*

Copies: Specify a number of copies

Print scale: Choose or enter the print scale

Print map size: *Entire map*, *Part of map* or *One page*; position the printing range in the drawing area

Options: *Intensity*, *Line width* and *Screen grid*

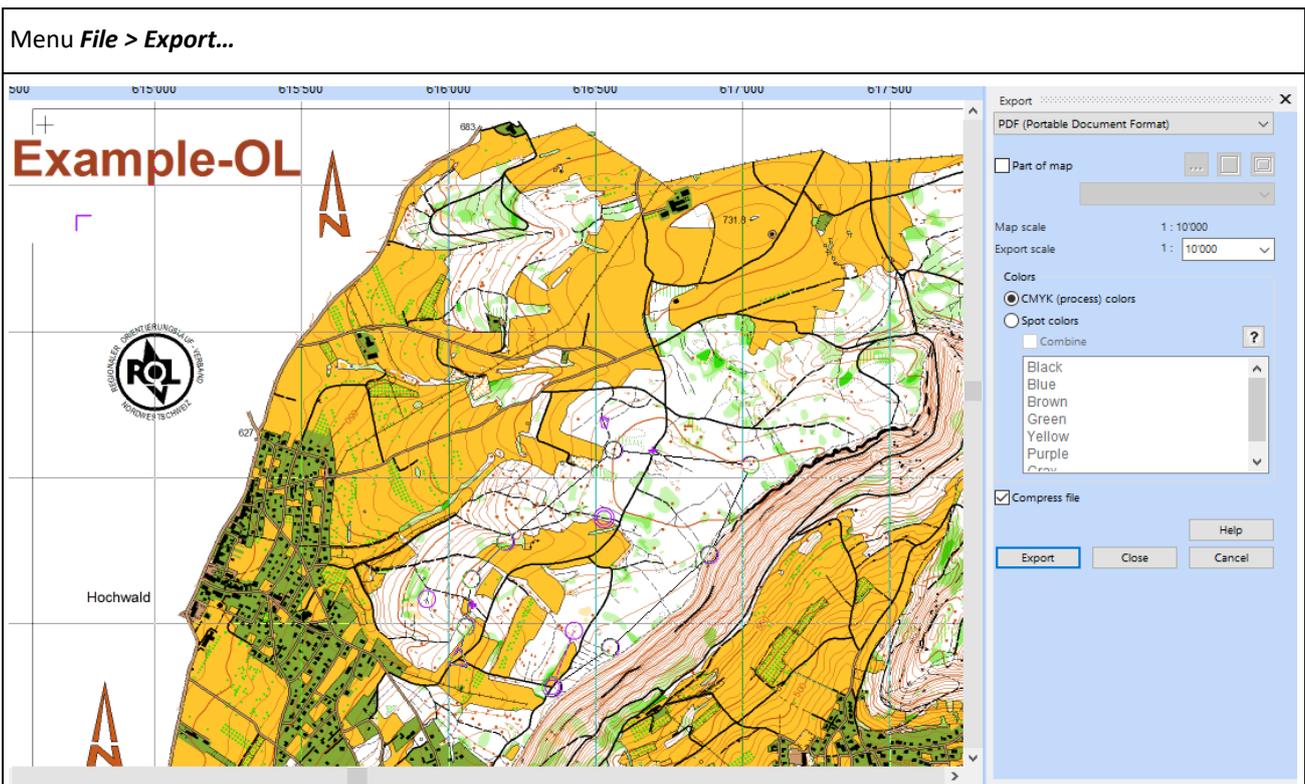
Select Courses/Classes: Choose *Courses* or *Classes* that should be printed.

-> **Print:** Print file and save settings

-> **Close:** Close dialog and save settings

-> **Cancel:** Close dialog **doesn't** save changed settings

12.2 Export Map and Course as PDF



Choose PDF as **Export format**

 To export a PDF, you need to be in **Normal Mode** (menu **View > Normal Mode**)

Part of map: Random rectangle or a standard paper format

Export scale: Choose export scale

Colors: Select **CMYK (process) colors**

Compress file: Check this option to reduce the pdf file size

-> **Export:** Export file and save option

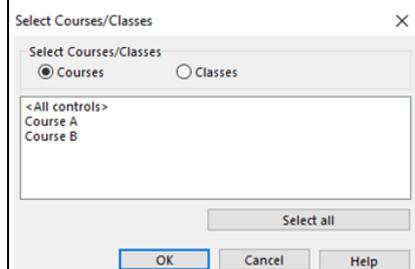
-> **Close:** Close dialog and save settings

-> **Cancel:** Close dialog **doesn't** save changed settings

The **Select Courses/Classes** dialog appears.

Choose **Courses** or **Classes**

-> **OK**



12.3 Print Control Descriptions

Menu **Course Setting > Print > Control Descriptions**

The **Print Control Description** dialog appears.

Printer: Choose printer and set options

Symbolic/Text control description: Choose symbolic or text control description to print

Box size: Specify the size of the control description field (standard = 6mm)

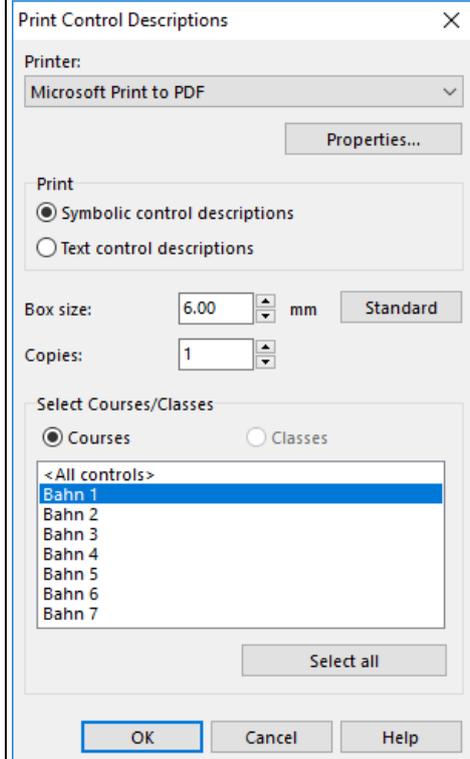
Copies: Specify the number of control descriptions

 If you enter more than 1 copy, OCAD will fill entire pages with the same course until the number of copies is reached. Therefore, if you enter "2" you will get one page per course filled with as many control descriptions as possible of that course.

Select Courses/Classes: Choose courses or classes

-> **OK**

 In Windows 10 and later it is possible to export the control description in a pdf file. Choose the *Microsoft Print to PDF* as printer. A PDF will be created when you click on **OK**.



12.4 Course Setting Export for the Result Software

Depending on the specification of the result software the definition of the course setting must be exported as an XML or text file:

- a) Menu **Course Setting -> Export -> Courses (XML IOF Version 2.0.3)...**
Menu **Course Setting -> Export -> Courses (XML IOF Version 3.0)...**

or

- b) Menu **Course Setting -> Export -> Classes Version 8 (Text)...**

a) XML IOF Version 2.0.3 /XML IOF Version 3.0

The **Export Courses (XML)** dialog appears.
Choose a folder and name it. -> **Save**

b) Text File Version 8

The **Export Classes Version 8 (Text)** dialog appears.
Choose a folder and name it. -> **Save**

12.5 Export to Web Services

The function **Upload to Livelox** can be found in the **Course Setting** menu of the OCAD program. It will upload maps, courses and course data directly to Livelox. From there you can publish your events on the web.

 Livelox is a web-based application for analysis of routes from orienteering races. As an organizer of orienteering practices or competitions, you can publish maps and courses to Livelox to let spectators follow the competitors in real time, and to let participants analyze their route choices post-race.

 More information:

https://www.ocad.com/wiki/ocad/en/index.php?title=Upload_to_Livelox

The function **Upload to SPORTident Center** can be found in the **Course Setting** menu of the OCAD program. It will upload maps, courses and course data directly to the SPORTident Center. From there, you can publish your events on the web.

 SPORTident provides timing products and is widely used for orienteering competitions and practices.

 More information:

https://www.ocad.com/wiki/ocad/en/index.php?title=Upload_to_SPORTident_Center

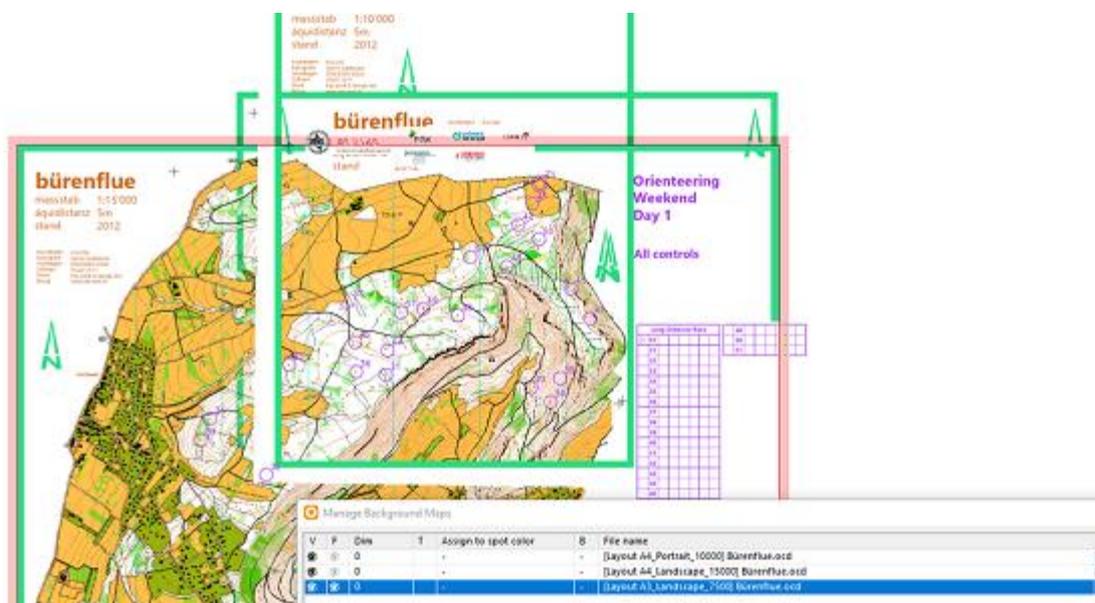
12.6 Canvas

The **Canvas** function in the **Course Setting** menu helps you to export courses or classes in different scales and layouts within the same course setting project.

Within a course setting project, so-called canvases can be defined and used to export courses or classes in different scales and layouts.

For example, courses in the scales 7'500, 10'000 and 15'000 can be exported as A4 portrait and A3 landscape format for an orienteering competition from the same course setting project.

 In the OCAD Wiki, the Canvases function is described in detail and an example with demo files is available. <https://www.ocad.com/wiki/ocad/en/index.php?title=Canvases>



12.7 Export to OCAD Sketch App

The OCAD Sketch App has been developed for mapping in the terrain on mobile Android and iOS devices.

A Course Setting Project can easily be sent to the OCAD Sketch App via menu **File >OCAD Sketch App Data Exchange**.

As a course setter that checks control sites, you can capture map corrections and notes on your mobile device for yourself or send them directly to the controller, map maker or event adviser.

Also, the GPS position gives you additional security in the terrain whether you are at the right control site or not.

More information:

<https://www.ocad.com/app>

