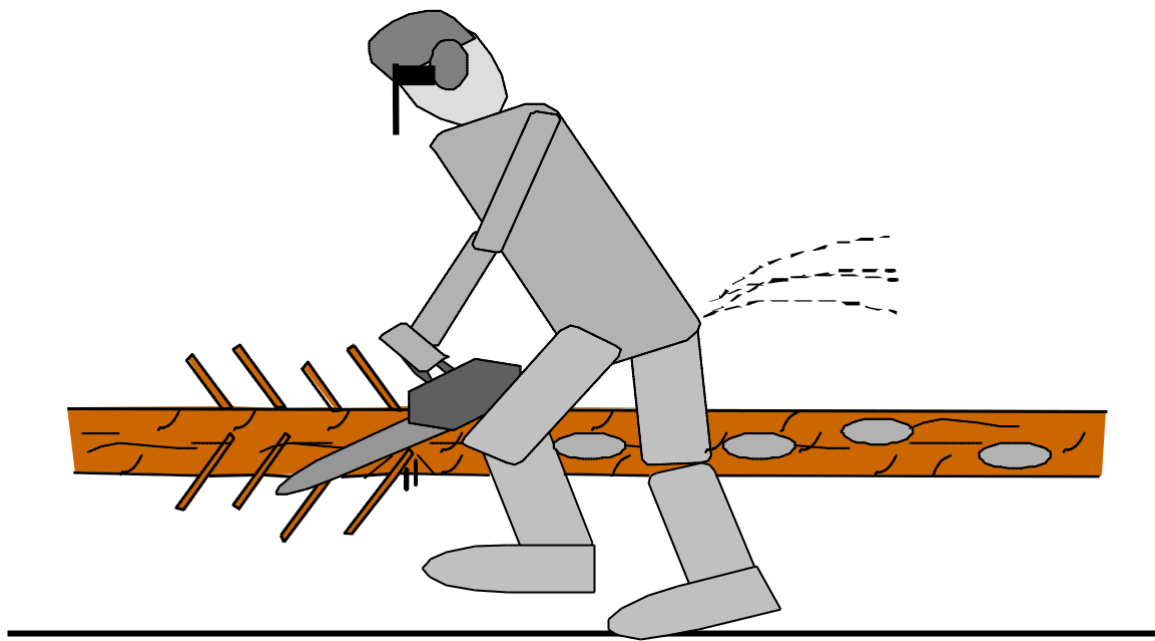


**Set of Rules European Students  
CHAMPIONSHIPS In Forestry Skills**

**Version for short on-line  
competition**



**Version: 2022, on-line**

# CLASSING / RANKING

The following classes are defined:

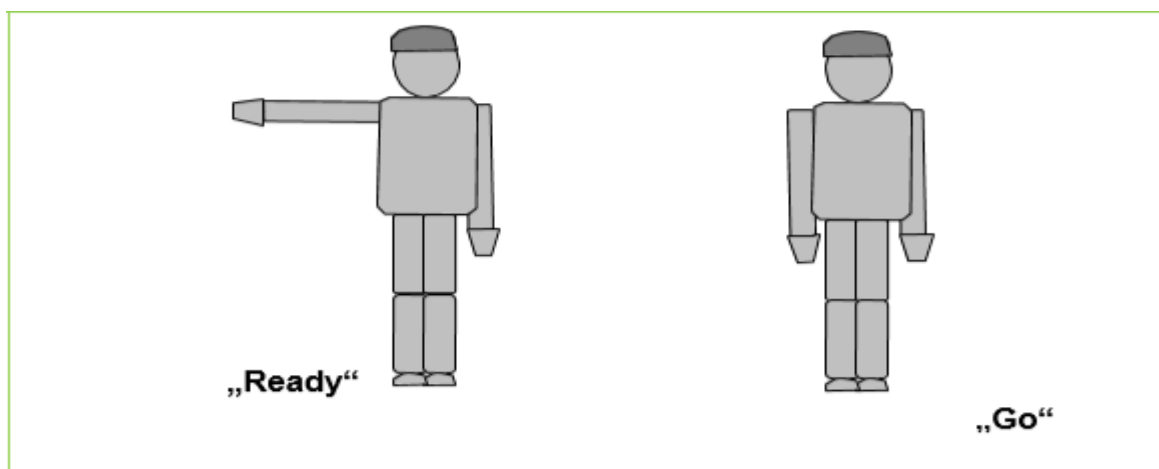
Fitting another chain: In case of equal scores the contestant with the better time is the winner.

Total: In case of equal scores the nation with the better theoretical part is the winner.

# REGULATIONS

*Figure 1: How to start the saw*

The starting commands are the same for each discipline. The commands are: **“Ready”** **“Go”**



*Figure 2: The starting commands*

The starting command is therefore divided into two parts, as shown in figure 2.

The tools and the participant must stand fully behind the starting line. This rule applies for all disciplines.

The chain saw may not be touched with the hands before starting the discipline.

Competitor **and time** start after start sign.

No.	Violations of general safety rules	Penalty points			
1	<b>Appearance on the competition site without call</b>		50		
2	<i>Working without gloves or other hand protection, helmet, eye protection, ear protection, protective footwear, leg protection</i>				
3	<i>Starting the saw in an incorrect way</i>				
4	<i>Touching the saw chain while the engine is running</i>				
5	<i>Moving from place to place when the saw chain is running</i>				
6	<i>Saw not starting within 5 minutes</i>				
7	<i>Using the saw one-handed when the chain is running</i>				
8	<b>Injuries that do not require medical attention</b>		20		
9	<b>Injuries that require medical attention</b>		50		
10	<i>First-aid kit or safety equipment is missing</i>				
11	<b>Violation of general safety rules</b>		50		
12	<b>If the contestant moves back after the finishing action for the discipline and manipulates something</b>		50		
13	<b>Bad behaviour f.e. missing respect, insulting, throwing away tools or chainsaw</b>		20		

*Table 4: Penalty points for violation of general safety rules*

## Fitting another chain

### General information:

For this discipline the contestant shall dismantle and assemble the cutting apparatus of the chainsaw.

After finishing the discipline, the jury control the power of nuts tension with dynamometric tool on 0,5 kg.

If the work has been carried out so poorly that the tension of nuts is under 0,5 kg, the work is not correct. This is assigned 50 penalty points.

The table for fitting another chain is 1.5 m long, 70 cm wide and 80 cm high. The table is set at 90° to the starting line with a distance of 1 meter and may not be moved (see figure 20).

Before the start only the saw, a replacement chain, the contestant's personal tools and the stop button may be placed on the table.

The contestant stands totally behind the starting line, gets the starting signal and the time is running.

The contestant may perform the discipline without the use of gloves, a safety shirt, a helmet or face and ear protection.

The key will be controlled by the referees (preparation- for example tape- is possible). To finish the key must be out of the nut. The button has to be pressed by the hand, not f.e. by an elbow. Otherwise 20 penalty points will be awarded.

Time: The time can be measured with a digital display. It is also possible to use 2 manual watches for timekeeping.

Tension of the chain: There can be a gap between the tie strap and the bar before and after the discipline. Penalty points (20) are given if the driving link is out of the bar. The referee may not touch the chain (checking the chain tension only visual).

### Preparations for the competition site

- Restricting access to the competition site
- Setting up the table
- Marking the starting line
- Setting up the manual stop button for the timer

### Preparations for the discipline

- The saw is inspected to ensure it is standard. In particular no parts may be removed, screws holding the bars in place may not be shortened, the threads must be standard.
- The nuts are then tightened with a dynamometric wrench at a torque of 20 Nm.
- The bar is labelled so that it can be checked after the performance to ensure it has been turned correctly.
- The individual tools are on the table.
- The saw is assigned to the corresponding group.
- The contestant's hands are checked for injuries. Any existing injuries are marked.
- The shortest tooth length is checked on both chains (at least 3 mm).

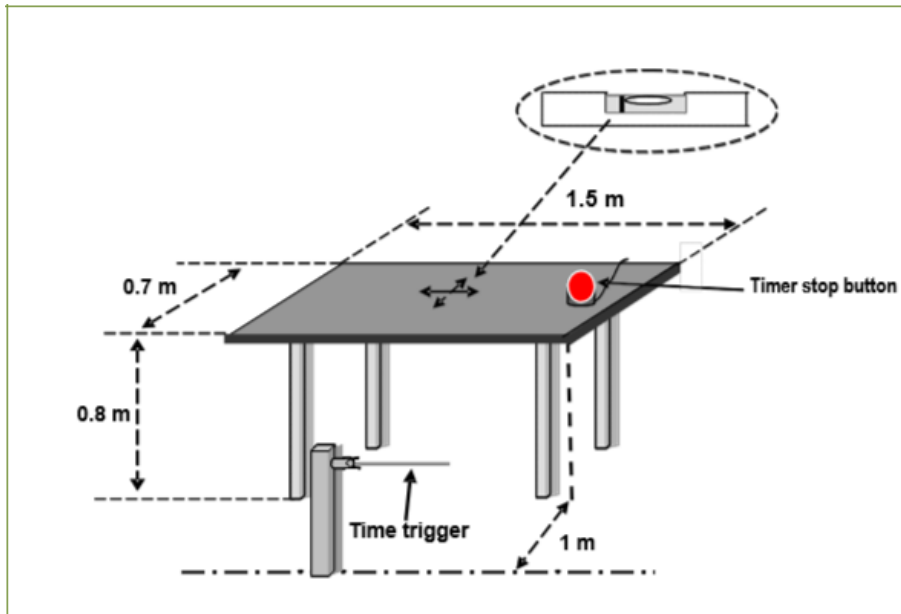


Figure 20: Table for the discipline "Fitting another chain"

### Start and finish of the discipline

The discipline starts when the time is started (triggered by the contestant) and ends when the contestant stops the time.

### Assessing the performance

The chainsaws are divided into two groups:

- Group 1: Two safety screws and chain tightened with screwdriver  
 Group 2: Only one safety screw or chain tightened without screwdriver (no bolt).

### Points are awarded for:

- Time taken (see Table 12)
- Penalty points for violations of work safety regulations (see table 4)
- Penalty points for carrying out the task incorrectly

### Steps involved

The contestant places the chainsaw on the table and then stands completely behind the starting line, which is 1 m away from the table.

When the "start" command is given (timer is triggered), he has to do the following:

- Move to the table
- Release the screw nuts
- Remove the sawdust deflector (if necessary)
- Remove the chain from the bar and the sprocket
- Remove the bar and turn 180° on the longitudinal axis (or 360° for bars that must not be turned or that cannot be mounted at 180°)
- Place another chain onto the bar
- Mount the sawdust deflector (if necessary)
- Adjust the chain tension (if necessary)
- Stop the timer with the hand

Once the discipline has ended, the contestant waits for instructions from the referees.

Once the task has been completed, the jury will measure the result.

## 2.7 Measurements - evaluations

The following points are awarded for:

Time:

The time is measured on a fully visible digital display in seconds. Points are awarded as indicated in table 12. Measuring accuracy = 0.1 seconds.

Group 1 / Time etc. + 2 Points / 0,5 sec.	Points	Group 2 / Time etc. + 2 Points / 0,4 sec.
8,1 - 8,5	140	4,6 - 4,9
8,6 - 9,0	138	5,0 - 5,3
9,1 - 9,5	136	5,4 - 5,7
9,6 - 10,0	134	5,8 - 6,1
10,1 - 10,5	132	6,2 - 6,5
10,6 - 11,0	130	6,6 - 6,9
11,1 - 11,5	128	7,0 - 7,3
11,6 - 12,0	126	7,4 - 7,7
12,1 - 12,5	124	7,8 - 8,1
12,6 - 13,0	122	8,2 - 8,5
13,1 - 13,5	120	8,6 - 8,9
13,6 - 14,0	118	9,0 - 9,3
14,1 - 14,5	116	9,4 - 9,7
14,6 - 15,0	114	9,8 - 10,1
15,1 - 15,5	112	10,2 - 10,5
15,6 - 16,0	110	10,6 - 10,9
16,1 - 16,5	108	11,0 - 11,3
16,6 - 17,0	106	11,4 - 11,7
17,1 - 17,5	104	11,8 - 12,1
17,6 - 18,0	102	12,2 - 12,5
18,1 - 18,5	100	12,6 - 12,9
18,6 - 19,0	99	13,0 - 13,3
19,1 - 19,5	98	13,4 - 13,7
19,6 - 20,0	97	13,8 - 14,1
20,1 - 20,5	96	14,2 - 14,5
20,6 - 21,0	95	14,6 - 14,9
21,1 - 21,5	94	15,0 - 15,3
21,6 - 22,0	93	15,4 - 15,7
22,1 - 22,5	92	15,8 - 16,1
22,6 - 23,0	91	16,2 - 16,5
23,1 - 23,5	90	16,6 - 16,9
23,6 - 24,0	89	17,0 - 17,3
24,1 - 24,5	88	17,4 - 17,7
24,6 - 25,0	87	17,8 - 18,1
25,1 - 25,5	86	18,2 - 18,5
25,6 - 26,0	85	18,6 - 18,9
26,1 - 26,5	84	19,0 - 19,3
26,6 - 27,0	83	19,4 - 19,7
27,1 - 27,5	82	19,8 - 20,1
27,6 - 28,0	81	20,2 - 20,5
etc. -1 Point / 0,5 sec.		etc. -1 Point / 0,4 sec.

**Table 12: Points for Fitting another chain**

Penalty points are given in the following cases:

### Dropping items

Dropping any item from the table during the performance will be penalized with 20 penalty points. The contestant may, however, pick up any items he has dropped and complete the task.

### Bar not turned

The bar must be turned at least once in the longitudinal axis. If the contestant fails to do so, he receives 50 penalty points.

### **Failure to carry out task correctly**

If there is a gap between the chain and the bar so that the driving link is out of the bar, 50 penalty points are given. The referee turns the chain once around with the hand, then check driving links. The driving links must be completely in the bar. When the referee touches the chain on under side of the bar, the chain must be "quiet" (without air distance to the bar).

### **Injury involving bleeding**

Any recognized injury that is bleeding is assigned 20 penalty points.

### **Safety regulations**

Violations of work safety regulations: depends on the violation (see table 4).

### **Manipulating the saw after the discipline has ended**

At the contestant's request or as ordered by the referee, incorrectly fitted chains can be / have to be refitted. The saw is checked to ensure that the chain is correctly fixed in place and that all screws are fitted and tightened (cannot be released without tools). 50 penalty points are given if a contestant has to refit the chain.

### **Incomplete fitting of cutting apparatus:**

If the contestant fails to fit all parts, he receives a score of zero for the entire discipline.

### **Poorly fitted cutting apparatus:**

Referee check the nuts tension with dynamometric tool on 0,5 kg. Every nut, with lower tension give 50 penalty points.

### **Incorrect stopping of the time**

The competitor is allowed to stop the time with the key in his hand. However, the button must be pressed with the hand and not for example by the elbow or arm. 20 penalty points will be given.

## **2.8. – video control**

When the time is measured with the "starting gate", then is enough to make a video with 2 cameras.

When the time is measured with the stopwatch, then must be 2 cameras for chronometer and 2 for the contestant.

For contestant control must be two cameras: one camera in the front side and second camera from the side (90 degrees). The front camera can move nearby to the contestant to video a details. However, the camera can't go nearby to 2m (contestant needs enough space).

Before start, camera check:

1. Time display (00)
2. New chain (chain must have normal driving links and sharp teeth with length min. 3mm)
3. Chain tension control (Only "eye control" - chain cannot have air distance between chain and bar)
4. Nuts control (Nuts must be on the hand tension, then must be turned with dynamometric wrench on 2 kg)
5. Competitor hands control (Sign all the existing injures)

When stop button is pressed, then come one camera nearby to check:

1. Time display
2. First (old) chain (first chain must have normal driving links)
3. Chain tension control

4. Nuts control
5. Competitor hands control

All controls are made with same camera, the second camera is control camera for first cameraman, referee and contestant.

Any interference with the video after the end of the recording is prohibited.

The control for "rubber" is not necessary online.



# PERFORMING THE FORESTRY COURSE

## 1. Preparation of the Forestry Course

This event is a team contest; all 2 contestants start together.

*Mobile phone, calculator etc. are not allowed.*

Questions to these Tasks of the Forestry Course are possible:

Nr.	Task
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	Volume of the standing tree, m <sup>3</sup> (Exactness 1/100 m <sup>3</sup> )
9.	Volume of the saw log, m <sup>3</sup> (Exactness 1/100 m <sup>3</sup> )
10.	
11.	Determining tree species (Latin, English)
12.	Determining kinds of wood with bark (Latin, English)
13.	Determining animals, hunting (Latin, English)
14.	Diseases and pests (Latin, English)
15.	
16.	First Aid in the forest (situated), prevention of accidents ** (English)

The following lists of trees, wood, animals, pests, diseases may help the competitors to prepare for the competition:

**Task 11 Determining tree species (parts of tree with foliage)**

Latin	English
Abies alba	Silver fir
Acer campestre	Hedge or field maple
Acer platanoides	Norway maple
Acer pseudoplatanus	Sycamore maple
Alnus glutinosa	Common alder
Alnus incana	Grey alder
Betula (pendula, pubescens)	Birch
Corylus avellana	Hazel nut
Fagus silvatica	Beech (common -)
Fraxinus excelsior	Ash (common-)
Larix sp.	Larch
Picea abies	Spruce
Pinus silvestris	Scots pine
Populus tremula	Aspen
Prunus avium	Wild cherry, bird cherry
Pseudotsuga menziesii	Douglas fir
Quercus petraea	Sessile oak
Quercus robur	English oak
Salix sp.	Willow
Sorbus aucuparia	Rowan, mountain ash
Taxus baccata	Yew
Tilia (cordata, platyphyllos)	Lime / linden (Common-,Silver-)
Ulmus (glabra, arpinifolia)	Elm

**Task 12 Determining kinds of wood (log with bark)**

Latin	English
Abies alba	Silver fir
Acer sp.	Maple
Alnus sp.	Alder
Betula sp.	Birch
Fagus silvatica	Beech (Common -)
Fraxinus excelsior	Ash
Larix sp.	Larch
Picea abies	Spruce
Pinus silvestris	Scots Pine
Populus tremula	Aspen
Prunus avium	Wild cherry, bird cherry
Pseudotsuga menziesii	Douglas fir
Quercus sp.	Oak
Salix sp.	Willow
Sorbus aucuparia	Rowan, mountain ash
Taxus baccata	Yew
Tilia sp.	Linden, lime
Ulmus (glabra, arpinifolia)	Elm

**Task 13 Determining animals (body, head, trophy, footprint/track)**

The animals should be determinable also for students from countries where the animal does not appear in the wild.

Latin	English
Accipiter nisus	sparrow hawk
Alces alces	elk, moose
Anas platyrhynchos	mallard (duck)
Aquila chrysaetos	golden eagle

Buteo buteo	common buzzard
Bubo bubo	eagle owl
Canis lupus	gray wolf
Capra ibex	ibex, rock goat
Capreolus capreolus	roe (deer, -buck)
Castor sp.	beaver
Cervus elaphus	red deer
Columba palumbus	common wood-pigeon
Corvus corone corone	carrion crow
Dama dama	fallow-deer
Dendrocopos major	spotted woodpecker
Dryocopus martius	black woodpecker
Falco peregrinus	peregrine (falcon)
Falco tinnunculus	kestrel
Felis silvestris	wildcat
Garrulus glandarius	Eurasian jay
Lepus europaeus	brown hare
Lynx lynx	lynx
Lyrurus tetrix	black cock
Martes ( - martes, - foina)	marten (pine -, stone -)
Meles meles	badger
Mustela nivalis	weasel
Perdix perdix	grey partridge
Phasianus colchicus	ring-necked pheasant
Pica pica	black-billed magpie
Picus viridis	green woodpecker
Procyon lotor	raccoon
Rangifer tarandus	reindeer
Rupicapra rupicapra	chamois
Sciurus vulgaris	Eurasian red squirrel
Sus scrofa	wild boar
Tetrao urogallos	capercaillie, mountain-cock
Tetrastes bonasia	hazel-hen
Ursus arctos	brown bear
Vulpes vulpes	(European) fox

### Task 15 Recognizing pests, diseases and damages

Latin	English
Blastophagus minor	Lesser pine-shoot beetle
Blastophagus (Myelophilus) piniperda	Large / common pine-shoot beetle
Ceratocystis sp.	Blue stain
Cronartium flaccidum	Scots pine blister rust
Fomes annosus	Butt rot
Hylobius abietis	Large pine weevil
Ips typographus	8-toothed bark beetle
Lachnellula willkommii	Larch cancer
Pityogenes chalcographus	6-toothed spruce bark beetle
Xyloterus lineatus	Spruce ambrosia beetle
N.N.	Damages caused by antlers (fraying=rubbing against the bark)
N.N.	Damages caused by mammals (f.e.caused by biting =browse impact)

## Evaluation of the Theoretical part

### Evaluation

- The competition will be in form of a quiz
- The right answers and points will be shown
- The team with the most right answers wins

### Even result

- In the case of even results there will be a “winner question”.



Set of rules for the European Students Championships in Forestry Skills

escfs protocol 1

<b>Evaluation of Fitting another chain</b>		Startnumber:			
Contestant:		Nation:			
Group of chain saw (type of bar fixture)		I (two nuts)		II (one or no nut)	
No.	Evaluation	Unit		Results	Points
1	Time <i>(measuring 0.01 sec)</i>	Seconds:	Sec.		
2	Incomplete fitting of cutting apparatus <i>0 points for this discipline</i>	No	yes		
3	Dropping any part of the chain saw or tools on the ground <i>20 pts.</i>	No	yes		
4	The bar was not turned <i>50 pts.</i>	No	yes		
5	Chain not correctly tightened <i>50 pts.</i>	No	yes		
6	Too early start or incorrect stopping <i>20 pts.</i>	No	yes		
7	Adjusting the cutting apparatus after the performance <i>50 pts.</i>	No	yes		
8	Appearance on the competition site without permission <i>50 pts.</i>	No	yes		
9	Injury that does not require medical care <i>20 pts.</i>	No	yes		
10	Injury that requires medical care <i>50 pts.</i>	No	yes		
11	Chain gets stuck or slips off the bar or a nut drops to the ground in Bucking by combined cuts or Precision bucking	No	yes		
12	First-aid kit missing - no permission to start <i>50 pts. And 5 min to find is</i>	No	yes		
13	Manipulation any thing afther carrying out the finishing/tims topping action of the discipline <i>50 pts.</i>	No	yes		
TOTAL POINTS					
SCORE FOR FITTING ANOTHER CHAIN					
Signature of contestant		Signature of judge		Signature of the head of the calculation group	
Time		Time		Time	

