

# Welcome to The Mountaineers 2019

## Basic Alpine Climbing Course





# Objectives for tonight

- Understand the structure of the course
- Prepare for Field Trip 1:
  - Knots
  - Top-rope belay skills
  - Rope ascending skills
- What's next?



# Big picture: Course goals



- Master Basic mountaineering skills with a focus on safety
- Connect with the Mountaineers climbing community
- Stimulate your curiosity about taking advanced courses, and contribute to the Club as volunteers, instructors, leaders
- Have an amazing experience and be proud of your accomplishments

# Big picture: Instructors



- **Volunteers**, who love to climb – and teach!
- Love introducing people to the mountains
- Paying it forward and passing on the legacy
- Do their best in their own way to provide a safe and excellent experience. All have Mountaineers approval, very few have professional (AMGA, AAC) certification.
- Hope you'll be thrilled about the course and that you will want to volunteer in the future



# Big picture: Time commitment



- Winter: read, learn, practice and get in shape.  
Skills nights, SIG events, Field trips  
Navigation and/or First Aid.
- Spring: read, learn, practice, continue conditioning.  
Skills nights, SIG events, Field trips  
Navigation and/or First Aid.
- Summer & Fall: climb, climb, climb.  
... and graduate!





Course  
structure:

**S**mall

**I**nstruction

**G**roup

. . . your  
support team







# SIG events

- Skill practice sessions
- Rock field trip
- Snow overnight field trip
- Informal conditioners





# Skills nights

Purpose: to practice skills with fellow students and get ready for field trips

Most Monday nights, 1/7 – 5/20.

Skills nights are optional, however, they are highly recommended.

SIG leaders *might* organize for SIG.

You can join w/o your SIG.

Seattle Basic Climbing - Optional Student Skills Practice (optional)			
Seattle Program Center	Mon, Jan 7, 2019 Registration closes Jan 5	81 participants 14 instructors	Tad Englund
Seattle Program Center	Mon, Jan 14, 2019 Registration closes Jan 12	88 participants 12 instructors	Tad Englund
Seattle Program Center	Mon, Jan 21, 2019 Registration closes Jan 19	87 participants 15 instructors	Tad Englund
Seattle Program Center	Mon, Jan 28, 2019 Registration closes Jan 26	94 participants 16 instructors	Tad Englund
Seattle Program Center	Mon, Feb 4, 2019 Registration closes Feb 2	95 participants 18 instructors	Tad Englund
Seattle Program Center	Mon, Feb 11, 2019 Registration closes Feb 9	90 participants 17 instructors	Tad Englund
Seattle Program Center	Mon, Feb 18, 2019 Registration closes Feb 16	97 participants 18 instructors	Tad Englund
Seattle Program Center	Mon, Feb 25, 2019 Registration closes Feb 23	91 participants 16 instructors	Tad Englund
Seattle Program Center	Mon, Mar 4, 2019 Registration closes Mar 2	99 participants 17 instructors	Tad Englund
Seattle Program Center	Mon, Mar 11, 2019 Registration closes Mar 9	91 participants 17 instructors	Tad Englund
Seattle Program Center	Mon, Mar 18, 2019 Registration closes Mar 16	98 participants 17 instructors	Tad Englund
Seattle Program Center	Mon, Mar 25, 2019	96 participants	Tad Englund





# Lectures

Purpose: Introduction of skills, cover a variety of topics

All lectures are optional, however, highly recommended.

Slides should be available under Course Materials.

Prepare by reading relevant chapters in Freedom of the Hills.

- 1) Course introduction, Top rope belay/lower, Rope ascending
- 2) Rappels, Belays, & Anchors (1/30)
- 3) Alpine Rock (3/6)
- 4) Snow Travel, Avalanche (4/4)
- 5) Glacier travel (5/1)



# Field trips

Purpose: Practice skills,  
demonstration of skills.

Field trips are mandatory.

They will happen rain or shine.

Most happen at the Program Center.

Sign up via webpage.

## Seattle Basic Field Trip #1 - Top-rope Belay/Lower, Anchor Intro. & belays.

Seattle Program Center	Wed, Jan 9, 2019 Registration closes Jan 7	4 participants on waitlist 4 instructors	Brian Seater
Seattle Program Center	Thu, Jan 10, 2019 Registration closes Jan 8	2 participants 2 instructors on waitlist	Skye Stoury
Seattle Program Center	Thu, Jan 17, 2019 Registration closes Jan 15	19 participants 7 instructors	Amanda Konenkamp
Seattle Program Center	Fri, Jan 18, 2019 Registration closes Jan 16	16 participants 16 instructors	Bill Borom

Please contact field trip leader if you have issues with a specific event.

Please contact Jan Abendroth with general questions.

We can sometimes accommodate if needed, not for everyone and every event.

Field trip curriculum online:

<http://tinyurl.com/seattle-basic-curriculum-2019>



# Field trips

#1: Top rope belay, ascending	January	<b>4x week nights</b>	PC
#2: Rappels, belays, anchors	February	<b>3x full days</b>	PC
#3: Rock <u>evaluations</u>	March/April	<b>3x <u>half days</u></b>	PC
#4: Snow travel	April/May	<b>3x full days</b>	Snoqualmie
#5: Crevasse rescue <u>eval.</u>	May	<b>4x week nights</b>	Kite Hill

## SIG field trips

- SIG Rock: Rock climbing practice **full day** various
- SIG Snow: Snow overnight **full weekend** various

## Additional conditioning requirement

Mt. Si in less than 2 hours, pack with 25 lb or 20% of body weight



# Climbs!

- Graduation requirement: 1x rock (BR), 1x glacier (BG)
- Alpine climbs (BA) -less rock and/or glacier- can be very fun and no less challenging.
- Planning on taking Intermediate next year: aim for 5+ climbs
- Check the climb listings frequently, sign up for alerts: <http://mountaineers-events.appspot.com/>
- Mark calendar with climb registration dates
- Sign up early, cancel if necessary, **don't** be a “no show”
- Respect “leader permission”, or “for SIG only until” notes
- Consider keeping an updated climb/scramble/conditioning resume handy, leaders might ask for it.
- Beta and Brews for Basics - less traveled routes. 4/10/2019.



# Graduation



- Requirements:
  - conditioning and field trips
  - Navigation, First Aid, Stewardship
  - 1x BR and 1x BG climb
- Access to all Basic climbs, all summer and winter scrambles
- Gateway to several advanced courses:
  - Intermediate Alpine, full package
  - Intermediate Alpine Glacier, Rock or Ice modules
  - Aid & Big Wall climbing
  - Water Ice climbing
  - Other climbing seminars, clinics, and courses
- Become another fantastic volunteer within this incredible outdoor adventure community!





# Wilderness First Aid

- Wilderness First Aid (16 hrs) + Scenario session = First Aid badge
- Multiple sessions available; credit must be completed before graduation deadline. Look for WFA/WOFA, not WFR
- High demand course - be proactive signing up!
- Can be done with other branches



Partial or full equivalency available for holders of current backcountry/wilderness medicine certifications. Contact First Aid course leader to determine eligibility.

*Note: Front-country only medical training **does not** qualify for equivalency.*



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Photo by SuJ'n Chon ©2013 SuJ'n Chon Photography



# Wilderness Navigation



## Navigation:

- |                       |                  |                 |
|-----------------------|------------------|-----------------|
| 1) eLearning workshop | Jan-March        |                 |
| 2) GPS online module  | Jan-March        |                 |
| 3) In-person workshop | 1/24, ..., 3/26  | (1 of 6 events) |
| 4) Field trip         | 2/23, ... , 4/28 | (1 of 5 events) |

All information can be found here:

<https://www.mountaineers.org/locations-lodges/seattle-branch/committees/seattle-navigation-committee/course-templates/basic-navigation-course/wilderness-navigation-course-seattle-2019>

You can join other branches too!



# Resources

- Student handbook: Your first reference
- Basic curriculum online: Detailed information on field trips  
<http://tinyurl.com/seattle-basic-curriculum-2019>
- Freedom of the Hills v9
- Your SIG: your first point of contact for all questions
- Basic climbing webpage:

Course Requirements	Roster	Required Equipment	Course Materials
<b>COURSE ACTIVITY</b>			
<b>DATE</b>			
<b>AVAILABILITY</b>			
<b>LEADER</b>			
<b>Seattle Basic Climbing Lecture #1 - Course Introduction, Top-rope Belay/Lower, &amp; Rope Ascending</b>			
Seattle Program Center	Fri, Jan 4, 2019 Registration closes Jan 2	6 participants 7 instructors	Allison Swanson

Course Requirements	Roster	Required Equipment	Course Materials
<b>NAME/DESCRIPTION</b>			
<b>TYPE</b>			
<a href="#">Basic Alpine Climbing Handbook 2019</a> Your first stop for how the course works. Bonus points for reading it cover to cover!			
File			
<a href="#">Basic Field Trips CURRICULUM - Folder</a> Field Trips 1-5 Curriculum Outline			
Folder			
<a href="#">Crevasse Rescue Illustrated 2018</a> Crevasse Rescue Illustrated 2018			
File			
<a href="#">SIG Rock Field Trip</a> SIG Rock Field Trip			
File			
<a href="#">SIG Snow Field Trip</a> SIG Snow Field Trip			
File			
<a href="#">Lectures</a> Collateral from the lectures			
Folder			
<a href="#">Basic Climbs Guide</a> A description of climbs eligible for graduation credit. 2010 is the most recent version.			
File			





# This is *your* class!

- Success is mostly in your hands
- Prepare for lectures and field trips, read up
- Be proactive: check your calendar against event dates
- Work with your SIG to stay on track with skills and conditioning.
- Any questions / issues:  
General: Vineeth, Allison - [basic.climbing@gmail.com](mailto:basic.climbing@gmail.com)  
SIGs: Diane Gaddis – [diane@wondergeist.com](mailto:diane@wondergeist.com)  
FTs: Jan Abendroth – [jan.abendroth@gmail.com](mailto:jan.abendroth@gmail.com)  
Graduation: Glenn Eades – [gleades@me.com](mailto:gleades@me.com)
- We want you to succeed and we are here to help!



# Field Trip 1: Knots, Belaying & Prusiking

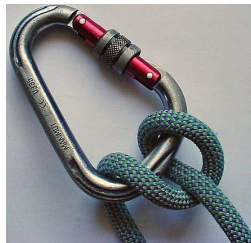
*Chapters 9, 10 & 18  
in Freedom of the Hills 9 (FotH9)*



# Knots!

**Discuss at your table knots for FT #1:**

- a) how to tie them,**
- b) what is their purpose**
  - Figure-8, also reweven and on a bight
  - Munter hitch
  - Prusik hitch
  - Double Fisherman bend



**Other knots and hitches you will learn throughout the class**

**Knots:** Overhand, water, slip, butterfly, bowline (single and double)

**Hitches:** girth hitch, clove hitch

**Bends:** water (knot)

# Knots, hitches, bends



- Why are there so many knots?
- Why is it important to learn them well?
- What is the difference between a knot and a hitch?





# Knots, hitches, bends

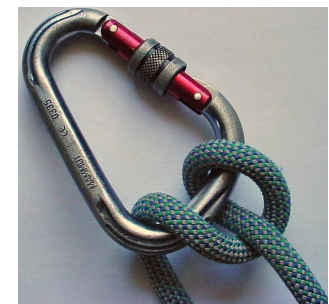
- Why are there so many knots?
  - Each knot has specific uses for which it is suited
  - For instance: tie-in to end of rope, to the middle, join two ropes together, etc.  
Some are used with slings, some with cord or rope. Some have a specific purpose, such as tying off the belay.
- Why is it important to learn them well?
  - Climbing safety relies on correctly tied knots
  - Well-tied knots are easy to recognize during partner check

[www.animatedknots.com](http://www.animatedknots.com) (Climbing section)



# Knots, hitches, bends

- Difference between a knot, bend, and a hitch?
  - Knots are usually tied with the rope only and create an endpoint (e.g. Figure 8 on a bight). A properly tied knot should not move.
  - Bends usually attach two ropes together (e.g. Double Fisherman's Bend).
  - Hitches connect a rope to another object, such as a carabiner (e.g. Munter hitch). A hitch can move!



# Top rope belay - PBUS



- American Alpine Club (AAC) Universal Belay Standard (PBUS)
- Observe the interaction between belayer and climber and identify the skills and commands . . .
  - What am I seeing?
  - What does the belayer say and do?
  - What does the climber say and do?
  - Why is it important?



<https://youtu.be/CFIz4cBFVro>

# Top rope belay - PBUS



- What did you see?
- What did the belayer say and do?
- What did the climber say and do?
- Why is it important?



# Top rope belay discussion



What did you see?	Why is it important?
Gear Check (harness, tie-in, belay set up, anchor)	Ensures proper fit of harness, rope connection to climber, belayer and anchor, belay set-up
Device vs. Munter	Different set up, different rope handling, proper set up prevents climber from falling.
Stance	Belayer anticipates direction of pull, protects brake hand, avoids hitting wall and losing grip, minimizes distance of fall.
Communication, Attentiveness	Each person knows exactly what will happen next, clear commands, first names used, focus.
Rope handling	Maintains clean rope pile, applies friction to belay as quickly as possible to limit distance of fall.
Smooth lower with both hands	Limits stress on anchor and/or injured climber after a fall.



# Tubular belay device

## Also referred to as an ATC:

- Friction is achieved by placing bends in the rope
- Rope bends help brake hand (how many bends here?)
- *Never* take brake hand off the rope
- Always concentrate on the climber and listen
- Compare impact on orientation of brake hand



Belay loop





# Munter hitch belay

## Alternative to tubular belay device, HMS\*

- Friction is achieved by rope bends and rope rubbing against rope
- Advantage: rope runs very fluid, fast belay
- Orientation of hand has less influence on brake strength
- *Never* take brake hand off the rope

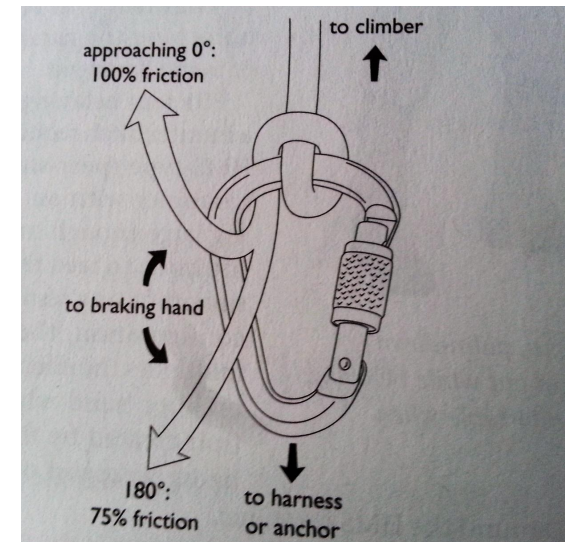


Werner Munter

More brake strength



Less brake strength (75%)





# Top-rope belay – takeaways



- There are several key components to safe belaying
- All components must be performed with competence/mastery to prevent climber from falling, and/or limit extent of fall
- Although not that hard or complicated it is extremely critical to get it right
- Poor belaying can cause injury / death
- Learn how to belay like you are preparing for the Belay Olympics

# 10 minute break!



We will continue with rope ascending demo





# Ascending a rope

There are several techniques how to ascend a rope.  
We focus on the Texas prusik method, FotH 9, p. 395/410

- Remain at your tables
- Intermediate students will demonstrate Texas prusik
- Observe the demonstration and try to identify the skills, asking yourself, . . .
  - What am I seeing?
  - Why is it important?
- After the demonstration discuss the questions above:
  - Make notes on what you've learned
  - Be ready to share when we come back together

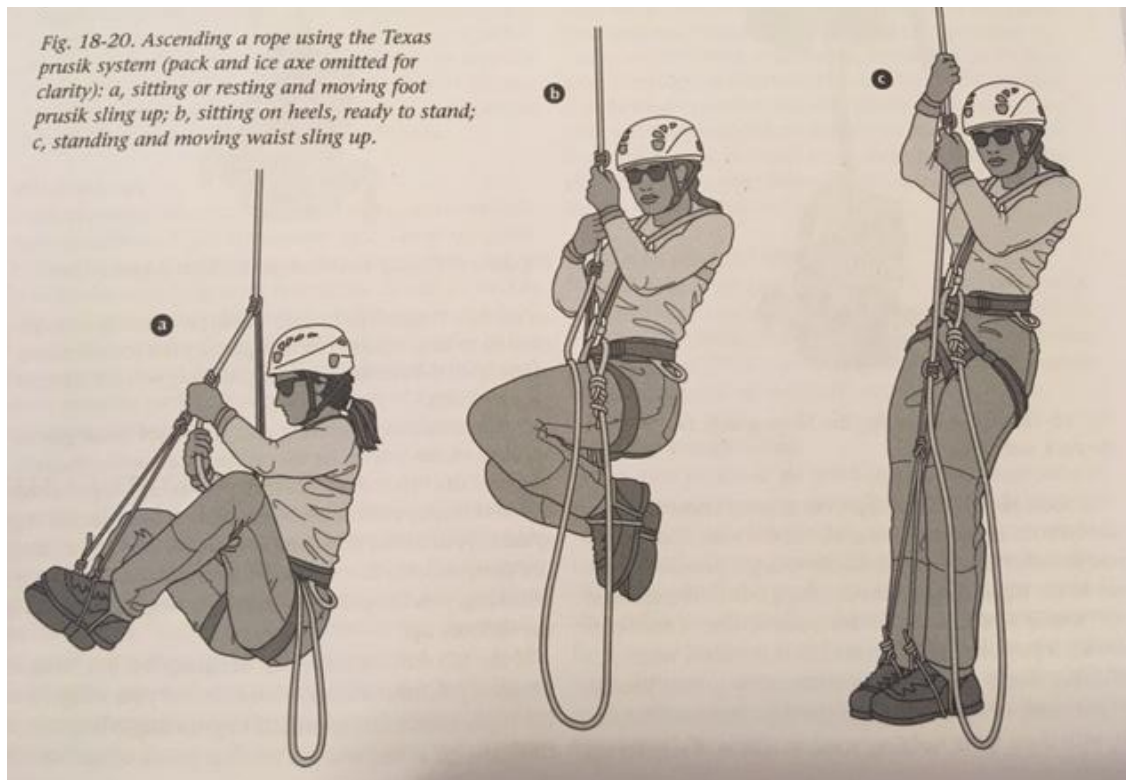
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# Ascending a rope - takeaways



- What did you see?
- Why is it important?





# Ascending a rope

What did you see?	Why is it important?
Friction knot use	Facilitates ascent; move it & leave it alone, don't keep hands on them or they may loosen
Chest harness use	Helps maintain balance while ascending rope
Removing pack	Improves balance; allows faster ascent of rope
Rope backup	In the case of prusik knot failure, back up prevents catastrophic slip down rope
Note on Friction	Amount of friction related to difference in diameters of the ropes. Ideal difference is 2.5 mm to 3 mm.

# Ascending a rope - takeaways



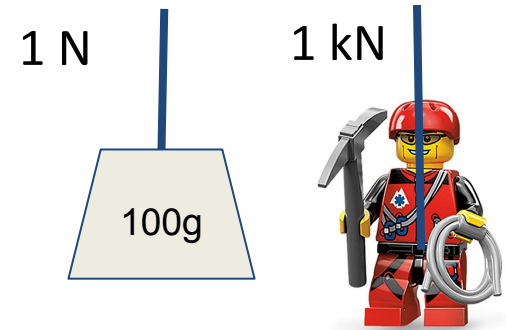
- There are several key components to safe prusiking
- All components must be performed with competence/mastery to achieve self-rescue
- Although not that hard or complicated it is extremely critical to get it right
- Used primarily for self-rescue from a crevasse



# Gear strength



- kN = kilo Newton
  - measure of force
  - 1 climber with gear (102 kg/225 lb), static
- How much force can gear take?
  - carabiner: 8-25 kN
  - rope: >11kN, rope stretch reduces force
- How much force causes harm on climber?
  - 6-8 kN cause significant injuries (tests on crash-test dummies)





# Gear strength - takeaways

- Your gear is rated much stronger than it needs to be to keep you alive
- As long as you care for it, use it as directed and ensure it is in good condition gear failure is very unlikely
- You are responsible for knowing how your harness is properly used. Not all harnesses are the same.
- Read the care instructions for your gear (download the \*.pdf files on manufacturers' websites):
  - Store it clean & dry
  - Store it in an airy place (not closed up)
  - Store it away from chemicals



# Field trip #1

- FT1 next two weeks: Wed 1/9, Thu 1/10, Thu 1/17, Fri 1/18\*
  - Arrive by 6:15pm, sign in, gear up, and ready at 6:30pm
- Please check website for gear
  - Bring hiking or approach shoes, no mountaineering boots
  - Please read [curriculum on-line](#) (Course materials) and Foth
- We will work in two groups:
  - A) Beginners who have not climbed (in the gym) before, who are not familiar with PBUS: Stations 1 and 2
  - B) More advanced climbers who are familiar with belay and PBUS: Stations 2 and 3
    - Everyone only has to do 2 stations
    - Prusik/rope ascending station can be checked off by SIG leader or host of Monday night skill sessions



# Welcome to the Basic Alpine Climbing Course!



We look forward  
to go climbing with you!!



# Questions?

