



**Savitribai Phule Pune University**

(Formerly University of Pune)

**Department of Sports and Physical Education**  
under the  
**Faculty of Inter-disciplinary Studies**

**Syllabus for**  
**Foundation Course in**  
**Mountaineering and Allied Sports**  
**(F. C. M. & A. S.)**

**Credit System**

(Academic Year 2024-2025)

National Education Policy (NEP) 2020

# FOUNDATION COURSE IN MOUNTAINEERING AND ALLIED SPORTS

## OBJECTIVES :-

- To incorporate experiential education through outdoor sports as per the '**New Education Policy 2020**' by MHRD, Gov. of India.
- To develop confident, healthy & courageous youth for nation, through safe & systematic training & learning platform for enthusiastic and energetic students
- To enable to understand the disciplinary content knowledge, application of content knowledge to further teaching the contents
- To make students accustomed to the world of global adventure sports sector
- To introduce potential employable opportunities in Maharashtra, India, and abroad in the adventure sector

## DURATION:-

- The duration of the course shall be of Three months (180 hours).
- Each working Day shall consist of Three hours of theory and practical work.

## ELIGIBILITY FOR ADMISSION:-

- ❖ Minimum XII Std. or equivalent examination passed from Govt. Board
- ❖ **Age Limit :-** 18 to 60 Years (Both inclusive)
- ❖ **Intake Capacity :-** 40 Students
- ❖ **Fitness Eligibility:-** Average fitness with no limitations for physical activities and exercises.
- ❖ **Medical Test:-** Candidates should be medically fit and sound provided other conditions of admissions are fulfilled.

## MEDIUM OF INSTRUCTION AND EXAMINATION:-

Medium of instruction will be in Marathi and /or English and question papers shall be set in Marathi and English.

## ELIGIBILITY FOR APPEARING AT FOUNDATION COURSE IN MOUNTAINEERING AND ALLIED SPORTS EXAMINATION:-

Student should have at least 75% Attendance during the Course. He / She should complete all the practical and other related work expected in all parts of the syllabus. A student who misses more than 25% of the scheduled classes will not be allowed to appear for the exam.

## **GENERAL INSTRUCTIONS :-**

- **The Foundation Course in Mountaineering and Allied Sports (F. C. M. & A. S.)** consists of **12 credits**.
- Details of the theoretical and practical components are given in the structure of the program.
- Internal evaluation will follow Continuous Comprehensive Evaluation procedures. Internal evaluation should be done on every credit of each course or minimum two per course as decided by the teacher concerned.

## **RULES & REGULATIONS:-**

The **Foundation Course in Mountaineering and Allied Sports (F. C. M. & A. S.)** will be awarded to a student who completes a total of 12 credits.

### **Each course will have**

- 50 % of marks for Final Examination
- 50 % marks for Internal Assessment

Each core unit will have an Internal (continues) assessment of 50 % of marks and a teacher may select a minimum of two of the following procedures:

- Written Test
  - Lecture / Library Notes
  - Seminar Presentation
  - Short Quizzes
  - Assignments
  - Field Work
- To pass a student shall have to get minimum aggregate 30% marks in each head of passing (i.e. internal assessment and final examination) and minimum aggregate 40% marks in each course.
  - Internal assessment answer book may be shown to the students concerned but not the final examination answer scripts.
  - While marks will be given for all examinations, they will be converted into grades. The final grade sheets and transcripts will have only grades and grade-points average.
  - To pass a student shall have to get minimum aggregate 40% marks (E and above on grade point scale) in each course.
  - The system of evaluation will be as follows: Each assignment/ test will be evaluated in terms of marks. The marks for separate assignment and the final examination will be added together and converted into a grade and later grade point average. Results will be declared after the final examination which will give grades, grade point average and the Final Grade.

## EVALUATION SCALE FOR INDIVIDUAL SUBJECT:-

Percent			Grade		Grade Points
80	to	100	O :	Outstanding	10
70	to	79	A + :	Excellent	09
60	to	69	A :	Very Good	08
55	to	59	B+ :	Good	07
50	to	54	B :	Above Average	06
45	to	49	C :	Average	05
40	to	44	P :	Pass	04
00	to	39	F :	Fail	00
--			Ab :	Absent	00

### The formula for conversion of Grade point average (GPA) into the final grade

09.00	-	10.00	-	O
08.50	-	08.99	-	A+
07.50	-	08.49	-	A
06.50	-	07.49	-	B+
05.50	-	06.49	-	B
04.25	-	05.49	-	C
04.00	-	04.24	-	P
00.00	-	03..99	-	F

$$\text{CGPA} = \frac{\sum (\text{Grade Points} \times \text{Credits})}{\sum (\text{Earned Credits})}$$

**STRUCTURE OF THE COURSE :-**

Part	Subject Code	Subject Name	Hours	Credits
I Theory	MTS-101	Basic Skills & Technical Knowledge - I	30	02
	MTS-102	Foundation of Human Performance and Emergency Care - I	30	02
	MTS-103	Introduction to Soft Skill, Life Skill and Allied Mountaineering - I	30	02
	Total Part-I		90	06
II Practical	MTS-104	Basic Skills & Technical Knowledge – II (Practical)	60	02
	MTS-105	Foundation of Human Performance and Emergency Care – II (Practical)	60	02
	MTS-106	Introduction to Soft Skill, Life Skill and Allied Mountaineering – II (Practical)	60	02
	Total Part-II		180	06
Total Course			270	12

# SYLLABUS

## MTS – 101

### Basic Skills and Technical Knowledge - I

Credit	Topics	Content
1	Knots & Equipment	<ul style="list-style-type: none"><li>• Know the types of knots</li><li>• Methods of tying knots</li><li>• Introduction to personal safety gears</li><li>• Trekking &amp; Rock-Climbing gears</li><li>• Equipment standards, Norms, &amp; governing body</li></ul>
	Outdoor Camping, Backpacking	<ul style="list-style-type: none"><li>• Basics of hiking, &amp; trekking</li><li>• Backpacking essentials</li><li>• Types of tent</li><li>• Parts of tent</li><li>• Precautions and preparation for tent pitching</li><li>• Science in packing a backpack</li><li>• Types, parts and usage</li><li>• Science of Outdoor Clothing</li><li>• Types of Clothing</li><li>• Advantage &amp; Disadvantage of clothing layers</li></ul>
2	Rock Climbing, Sport Climbing	<ul style="list-style-type: none"><li>• Types of hand &amp; foot holds</li><li>• Three-point technique</li><li>• Learn to harness and racking</li><li>• What is belaying and its importance</li><li>• Introduction to Lead Climbing</li><li>• Introduction to the world of Sport Climbing</li><li>• Rock Climbing - Top Rope Climbing &amp; Bouldering</li></ul>
	Rappelling	<ul style="list-style-type: none"><li>• Purpose of Rappelling</li><li>• Where and how to perform itsafely</li><li>• Equipment for rappelling</li></ul>
	Jumaring	<ul style="list-style-type: none"><li>• Purpose of Jumaring</li><li>• Jumar and its features</li><li>• Where and how to perform jumaringsafely</li><li>• Equipment for jumaring</li></ul>
	Navigation	<ul style="list-style-type: none"><li>• Various types of Maps &amp; their features</li><li>• Topographic Map Making</li><li>• Understanding contour lines</li></ul>

## MTS – 102

### Foundation of Human Performance and Emergency Care - I

Credit	Topics	Content
1	Human Physiology	<ul style="list-style-type: none"><li>• Introduction to Homeostasis</li><li>• Overview of Human Organ Systems</li><li>• Energy Systems</li><li>• Muscles types</li><li>• Insights into CV system</li><li>• Respiratory System</li><li>• Endocrine System</li><li>• ANS – Sympathetic &amp; Parasympathetic systems</li><li>• Role of ANS in performance enhancement</li></ul>
	Fitness Training	<ul style="list-style-type: none"><li>• Strength &amp; Conditioning</li><li>• Methodology of endurance &amp; Strength training</li><li>• Principles of systematic fitness training</li><li>• Introductory Sports biomechanics</li></ul>
2	First Aid	<ul style="list-style-type: none"><li>• Role of First Aid Responder</li><li>• ABC of First Aid</li><li>• Types of Injuries</li><li>• Types of Illness</li><li>• Medical Challenges in Sahyadri Outdoors</li><li>• Bites</li><li>• Dehydration</li></ul>
	Disaster Management	<ul style="list-style-type: none"><li>• Introduction to Anchoring Systems</li><li>• Safety equipment and regular checking</li><li>• Subjective and Objective Hazards</li><li>• Assessment of Hazards</li></ul>

## MTS - 103

### Introduction to Soft Skill, Life Skill and Allied Mountaineering – I

Credit	Topics	Content
1	Communication	Articulation of thoughts & speech Effective presentation through experience sharing( articles, ppt, short film blogging/vlogging)
	Effective Planning & Execution	Learn to plan outdoor activity with every details Reconnaissance of the destination Logistical challenges during planning Practical difficulties during execution Debriefing and report making of the event
	Leave No Trace	Learn 7 important environmental ethics of outdoors
	Administration and Legal aspect of Mountaineering and adventure Sports	Legal aspect, government regulations Administration of Adventure Activities International standards of group safety.
	Career guidance	Career Opportunities in Mountaineering & Adventure sport Sector
2	Sahyadri Biodiversity	Flora & Fauna in Sahaydri Rivers, dams Cultural diversity in Sahyadri
	Mountaineering at global level	Other Mountain ranges of world Evolution of Himalayas
	Mountain Terminology	Identify & Understand Sahaydri Mountain Terminology
	Introduction to Sahyadri	Evolution of Sahyadri Formation of Basalt Rock Forts - Historical Perspective Sculptural splendor of Sahyadri
	Adventure Sports at Global level	Introduction to other adventure sports life mountain biking, adventure racing, ultra marathons, mountain marathons, etc.



## MTS - 104

### Basic Skills and Technical Knowledge – II

Credit	Topics	Content
1	Knots & Equipment	<ul style="list-style-type: none"><li>• Demonstrations: Overhand on the bight, figure 8 on the bight, Clove Hitch, Reef knot</li><li>• Rope Coil – Butterfly, Casualty</li><li>• Introduction to personal safety gears</li><li>• Trekking &amp; Rock-Climbing gears</li><li>• Application, care &amp; maintenance of gear</li></ul>
	Rock Climbing, Sport Climbing, Outdoor Camping, Backpacking	<ul style="list-style-type: none"><li>• Bouldering, indoor sport climbing</li><li>• Types of hand &amp; foot holds</li><li>• Three-point technique</li><li>• Top Rope Climbing</li><li>• Learn to pitch tent</li><li>• Learn how to pack your backpack efficiently</li><li>• Backpack gear</li><li>• Techniques in Sport Climbing</li></ul>
2	Rappelling & Jumaring	<ul style="list-style-type: none"><li>• Perform and master the art of rappelling and jumaring</li><li>• Learn various techniques of rappelling &amp; jumaring in various scenarios</li></ul>
	Advance Sports Climbing	<ul style="list-style-type: none"><li>• Introduction to various systems and roles in sport climbing competition like route setter, judge, belayer etc.</li></ul>
	Belaying	<ul style="list-style-type: none"><li>• Different belay devices</li><li>• Different belay types</li><li>• Introduction to station belay , body belay etc.</li></ul>
	Outdoor Excursion	<ul style="list-style-type: none"><li>• 2-day hike/ training in Sahyadri hills</li></ul>

## MTS - 105

### Foundation of Human Performance and Emergency Care – II

Credit	Topics	Content
1	First Aid	<ul style="list-style-type: none"><li>• Identifying the casualty</li><li>• Providing the ABC of first aid</li><li>• Immobilization skills</li><li>• Handling wounds, bites, burns</li><li>• Casualty carrying techniques</li><li>• Casualty coil making</li><li>• Treatment in illness</li><li>• Bandaging</li><li>• CPR skills</li></ul>
	Disaster Management	<ul style="list-style-type: none"><li>• Making SERENE skilled anchor set ups</li><li>• Learn to fix rope in difficult sections</li><li>• Learn to lead a group of participants safely</li></ul>
2	Fitness Training	<ul style="list-style-type: none"><li>• Fitness Testing</li><li>• Mental Fitness Training Drills</li><li>• Physical Fitness training Techniques</li></ul>
	Outdoor Excursion	<ul style="list-style-type: none"><li>• 2-days training session in Sahyadri hills</li></ul>

**MTS - 106****Introduction to Soft Skill, Life Skill and Allied Mountaineering – II**

<b>Credit</b>	<b>Topics</b>	<b>Content</b>
1	Communication	<ul style="list-style-type: none"><li>• Effective presentation through experience sharing ( articles, ppt, short film blogging/vlogging)</li><li>• Collaborate in group activities to develop mutual trust, accountability, and team goal-oriented work</li></ul>
	Effective Planning & Execution	<ul style="list-style-type: none"><li>• Learn to plan outdoor activity with every details</li><li>• Reconnaissance of the destination</li><li>• Logistical challenges during planning</li><li>• Practical difficulties during execution</li><li>• Debriefing and report making of the event</li></ul>
	Documentation	<ul style="list-style-type: none"><li>• Critically analyze the subjects and make detailed documentation of the subject.</li><li>• Use various tools – AV/ PPT/ Story telling to demonstrate learning</li></ul>
2	Leave No Trace	<ul style="list-style-type: none"><li>• Learn 7 important environmental ethics of outdoors</li><li>• Implement them during the activities</li><li>• Demonstrate the learnings through presentation</li></ul>
	Photography & Videography	<ul style="list-style-type: none"><li>• Introductory session on outdoor photography &amp; videography</li></ul>
	Sahyadri Biodiversity	<ul style="list-style-type: none"><li>• Sample Collection techniques</li><li>• Equipment for sample collection</li></ul>
	Outdoor Excursion	<ul style="list-style-type: none"><li>• 1-day training session in Sahyadri hills</li></ul>

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