



Department of Physical Education and Sports

SOP for MARENA Gym, Steam and Swimmig Pool

SOP for MARENA Gym

Introduction

This policy promotes, protects, and regulates the use of the MARENA GYM facilities at SMIT, Sikkim. It aims to create a safe and effective environment for students and staff to improve their physical well-being.

Purpose

The MARENA GYM offers students and staff access to modern equipment to:

- Develop strength and gym skills.
- Enhance overall well-being through fitness and endurance improvement.
- Provide a break from academic routines.

The gym features treadmills, T-rack squat, weight bars, cross trainers, rowing machines, crunches pads, bench presses, and cycling machines.

Scope

The gym is available solely for SMIT:

- Students
- Staff/Faculty
- Dependants* of Staff/Faculty

* Mother/Father, Mother-In-Law/Father-In-Law, Son/Daughter, Son-In-Law/Daughter-In-Law are under the category of dependants.

Registration Fees and Membership:

- A registration fee (₹. 500/ month) is required for students and staff/faculty and dependant's registration fee is (₹. 400/ month).
- The gym operates on a monthly-based membership system.



Gym Access

- Students, staff, and dependants can avail the gym facilities by registering for a membership.
- Members/Students can pay the registration fee online or offline at the SMIT finance office through SBI Collect.
- After successful registration and fee payment, submit the printed fee receipt at the gym reception to receive your gym ID card valid for the subscribed month.

Batch Timings

The gym operates in batches to ensure proper utilization and safety. Specific timings for each batch are notified before beginning of each semester. Users can register for their preferred batch during registration while receiving their ID card at Gym reception.

Gym Protocol

Member Responsibilities

- **Safe Practices:** Learn proper techniques to avoid injuries. Report any unsafe behavior. (Gym trainers are always available to help)
- **Warm-up/Cool-down:** Perform a 5–10-minute warm-up before exercise and cool down afterward.
- **Hydration:** Maintain proper hydration by consuming water before, during, and after workouts.
- **Training:** Attend gym orientation sessions to understand equipment usage and safety protocols.

Gym Rules

- **Hours:** Morning 5:00 AM to 9:00 AM and 4.00 PM to 9.00 PM.
- **Sign-in/out:** Sign the register upon entering and leaving the gym.
- **Footwear:** Always wear proper shoes.
- **Hygiene:** Wash hands before and after workouts. Bring a water bottle and towel.
- **Dress Code:** Wear appropriate gym attire.
- **Equipment Usage:** Wipe down equipment before and after use. Do not move equipment from designated locations. Report any damage to the gym trainers.
- **Etiquette:** Avoid reserving multiple pieces of equipment. Use one at a time and signal availability with a towel.
- **Supervision:** Students must work under the supervision of a gym trainer; they are not recommended to work out their own by seeing YouTube or any other social media app. (details on coach availability to be included)
- **Familiarization:** Understand gym guidelines and equipment usage before starting workouts.

Gym Code of Conduct

- **Attire:** Use Gym towels (3 feet x 2 feet), wear proper shoes and gym clothes (refer to dress code).
- **Jewellery:** Remove any potentially hazardous jewellery like rings and necklaces.



- **Valuables:** Avoid bringing valuables to the gym. The institute/Staff is not liable for lost items.

Gym Injuries

- Report all injuries to the gym reception or trainers immediately.
- Seek medical attention at the SMIT Health Centre for proper treatment.
- Follow the RICE method (Rest, Ice, Compression, Elevation) for initial injury management.

Gym Safety

- **Buddy System:** Avoid training alone.
- **Warm-up/Cool-down:** Always warm up before exercise and cool down afterward.
- **Equipment Inspection:** Check equipment for wear and tear before use. Report any issues to the gym staff.
- **Weight Management:** Use weights manageable for your fitness level.
- **Discomfort:** Discontinue training if you feel unwell or dizzy.
- **Performance-enhancing Substances:** Refrain from using performance-enhancing substances.

SOP for MARENA Steam

Introduction

This policy outlines the guidelines for safe and responsible use of the SMIT steam bath facility.

Benefits

Steam baths offer a variety of potential health benefits, including relaxation, muscle tension relief, improved circulation, and detoxification (consult a healthcare professional for specific advice).

Availability

- The steam bath facility is available for use by SMIT students, staff/faculty and dependants only.
- Operating hours (Morning Session-5:00 AM to 9:00 AM, Evening Session 4:00 PM to 9:00 PM)

Contraindications

Due to potential health risks, the steam bath is not recommended for individuals with the following conditions (consult a healthcare professional before using the steam bath):

- Heart disease



- High blood pressure
- Diabetes
- Claustrophobia
- Skin conditions
- Pregnancy

General Guidelines

- Members are required to shower before and after using the steam bath.
- Wear appropriate swimwear while using the steam bath.
- Limit steam bath sessions to a maximum of 15 minutes. Take breaks in between sessions to cool down.
- Stay hydrated by drinking plenty of water before, during, and after using the steam bath.
- Avoid using the steam bath if you are feeling unwell or dizzy.
- Report any malfunctions or safety hazards to the designated staff member immediately.

Etiquette

- Maintain a respectful volume within the steam bath area.
- Be mindful of others and avoid overcrowding the steam bath.
- Refrain from using soaps, shampoos, or other products within the steam bath.

Safety Precautions

- Pregnant women, individuals with heart conditions, or any underlying health concerns should consult a doctor before using the steam bath.
- Be aware of your limitations and avoid exceeding your tolerance for heat.
- Exit the steam bath immediately if you experience any discomfort, dizziness, or difficulty breathing.
- If you witness someone having trouble, seek help from a staff member or call for medical assistance immediately.



Standard Operating Procedure

(Swimming Pool)

Introduction

This policy promotes, protects, and regulates the use of the MARENA Swimming pool at SMIT, Sikkim. It aims to create a safe and effective environment for students and staff to improve their swimming skills and physical well-being.

Purpose

The swimming pool offers students and staff access to modern equipment to:

- Develop various styles of swimming skills.
- Enhance overall well-being through fitness and endurance improvement.
- Provide a break/relaxation from academic routines.

Scope

The swimming pool is available solely for SMIT:

- Students
- Staff/Faculty
- Dependants* of Staff/Faculty

* Mother/Father, Mother-In-Law/Father-In-Law, Son/Daughter, Son-In-Law/Daughter-In-Law are under the category of dependants.

Registration Fees and Membership:

- A registration fee (₹. 500/ month) is required for students and staff/faculty and dependant's registration fee is (₹. 400/ month).
- The gym operates on a monthly-based membership system.

Swimming Access

- Students, staff, and dependants can avail the swimming pool facilities by registering for a membership.
- Members/Students can pay the registration fee online or offline at the SMIT finance office through SBI Collect.
- After successful registration and fee payment, submit the printed fee receipt at the swimming pool reception to receive the gym ID card valid for the subscribed month.



Batch Timings

The gym operates in batches to ensure proper utilization and safety. Specific timings for each batch are notified before beginning of each semester. Users can register for their preferred batch during registration while receiving their ID card at Gym reception.

Staffing:

Convener, Department of Physical Education and Sports will act as a Pool Manager for MARENA Indoor Swimming Pool. As acting Pool Manager, he/she will be in overall charge of the operating of the pool.

Lifeguards/Attenders:

All Staff acting as Lifeguards, are trained and skilled.

Swimming coach who is directly responsible for the training to the members whilst they are in the water. The responsible sports staff/coach of the swimming pool will have overall responsibility for all activities and will stop any training/activity that does not meet the required safety standards.

Poolside Supervision:

Lifeguards/Attenders should be clearly identifiable to the members when on duty and must carry a whistle when on poolside. Whistles are for use in emergency situations only, unless previously agreed with all Lifeguards and Poolside staff present at the time. Continuous supervision of the pool is always required while training or sessions are in progress. Constant observation is essential for all Lifeguards and Poolside Staffs to anticipate problems and deal with any emergency. To maintain high levels of vigilance and supervision, the maximum period of poolside duty without a break should not exceed three hours.

Unsupervised Swimming:

There are occasions when swimming pool staff members can use the pool. On such occasions, the staff is permitted to use the swimming pool unsupervised if there is a minimum of three people present. In the event of an incident, one person would remain with the casualty while the third raises the alarm. In the event of there being less than three people in the pool, all swimmers must leave the pool.

Pool Dimensions:

The Pool Dimensions are - 27 m x 11.5 m (Four Lanes) lanes are not marked. Shallow End Depth: 4.0 Feet Deep End Depth: 4.5 Feet.

Problems:

All Lifeguards and staff must be constantly vigilant and aware of problems:

- Problems created by the pool users/members.
- Activity problems are related to the way activities are undertaken.
- Improper conduct and lack of professionalism.
- Physical problems are related to the design and structure of the swimming pool, including entrance doors, floors, poolside, lane lines, water depth changes, access steps, etc.



Swimmer's Loads:

The maximum swimming load is 25 swimmers although a staff/student's ratio of 1:20 is in operation. In the event of overcrowding, swimmers will be asked to vacate the pool on a first-in, first-out basis. The recommended number of Lifeguards and staff will vary according to the number of swimmers and the type of activity.

- Squad training - One Lifeguard/Attender.
- Class Lessons - One Lifeguard/Attender.
- Free Swims - One Lifeguard or One Poolside Staff.
- Minor Competition - Min 4 Lifeguards and 4 Poolside staffs

Pool Users Safety Code:

The swimming pool user's safety code has clearly displayed on notice boards as mentioned below -

- No Diving in Shallow Water
- No Jumping No Running
- No Loose Clothing
- No Jewellery
- Swimming hats to be worn

Formal procedures:

The formal procedures may sometimes be necessary for swimmers who refuse to comply with staff instructions. This will involve verbal warnings, followed by a request to leave the pool. Should the swimmer still fail to comply then assistance should be sought from the Head. Persistent offenders may be banned from using the pool.

First Aid:

First Aid facilities are available on the poolside at the reception desk and in the SMIT Health Centre.

Treatment of Minor Injuries:

Where possible First Aid should be administered to a casualty by a Lifeguard or Poolside staff of the same gender or in the company of another person. All injuries needing first aid must be reported to the SMIT, Health Center, Associate Director (SA), and head Administration.

Telephone:

There is a telephone line to the pool (759). In an emergency dial 227 (SMIT, Health Centre).

Child Safety and Child Protection:

- Childs below 12 Years is not permitted to swim.
- Above 12 to 16 years of age, children are permitted to swim with their guardians.

Pool Security:

The Pool must be kept locked when the pool is not in use. Members should not be granted unsupervised access to the pool at any time.



Diving:

Diving is a particularly hazardous activity, and it is not allowed. Swimmers should not be asked to dive from the side of the pool to the bottom to retrieve objects. No jumping or diving must be allowed during free swims when the swimming load and the nature of the unstructured activities place swimmers at a far greater risk.

Health and Hygiene:

Water Contamination:

Swimmers should be encouraged to use the toilets and the showers before entering the water. If an accident occurs and blood, feces or vomit enters the pool water, the contamination must be dealt with in an emergency.

Dehydration:

It is not unusual for swimmers and those supervising on the poolside to become dehydrated during a session. Drinks, preferably only water, may be taken onto the poolside but only in hard plastic/metal bottles. Glass/tetra packs must not be taken onto the poolside at any time.

Glare:

Supervising staff must be aware of their ability to see all the areas of the pool, particularly the swimming pool bottom, surfaces, and changing rooms.

Casualties:

In the event of an emergency involving a casualty, the Pool Manager, Lifeguard, or Poolside Staff will act in accordance with the rescue and resuscitation techniques. The Pool is to be cleared of all swimmers by the sounding of three blasts on a whistle. The lifeguard blowing the whistle will normally take responsibility for the emergency action. Other staff should assist as directed. Remove the casualty from the water unless a spinal injury is suspected. In the case of a breathing spinal injured casualty, the head/neck must be stabilized in the water. Take appropriate First Aid/resuscitation action.

Accident Reporting Procedures:

For any accident which requires First Aid treatment, SMIT, health clinic will be informed. It is important to give full details of the incident (e.g. location, what happened, any treatment, emergency services called).

A report will also be sent to the Associate Director (SA), so that professional judgment can be made on whether the accident should be discussed by the Health and Safety Committee and whether it is reportable to the Central Referral Hospital (CRH).

Emergency Exits:

All exits from the building must be unlocked before swimming can commence. There are two main exits available; both are clearly marked. An evacuation may be required under the following circumstances -

- Power Failure
- Fire
- Failure of Filtration Plant



- Chemical Contamination
- Damage to the Pool Building

Emergency Situations:

Power Failure:

In the event of a power failure the lights, if in use, will go out and the air heating and water filtration system will cease to operate. The pool should be evacuated as quickly as possible, and all persons accounted for. Emergency lights are provided to allow safe passage from the building.

Damage to the Pool Building:

If damage occurs to the Pool Building, then the pool must be evacuated immediately. All persons should be directed to leave the building by the safest possible route.

Water Quality & Clarity

The pool must not be used if the water clarity is unsatisfactory. The bottom of the pool must always be clearly visible.

- **Water Quality** - The Pool water is tested regularly during the day. The pool must not be used if the water quality does not meet the specified requirements.
- **Water treatment** - must not take place while the pool is in use.
- **Water Temperature** - The optimum temperature for SMIT use is 28°C.

Water Contamination:

To reduce contamination such as urine, the members should be encouraged to use the toilet and the showers before entering the water. They must not be discouraged from returning to the changing room if they require the toilet during a swimming session.

In the case where an individual cut himself or herself in the pool area, the normal accident procedure should take place and the blood cleared up using cloths and a strong disinfectant. A spill kit is available at the pool for such instances. If blood has entered the water in substantial amounts or if a swimmer has vomited in the pool, then the pool should be cleared for the remainder of the day to allow for the dispersal of the material and the filtration and water treatment to take effect.

Water Treatment:

Swimming pool water must undergo treatment, to remain clear and clean, free from harmful substances, bacteria, viruses, algae, and other pathogens, and suitable for use by swimmers.



Recirculation and Filtration

Recirculation:

The swimming pool use recirculation systems. Where we use a pump to circulate water through a series of pipes to pass it through a filter, provide thorough disinfection, balance the temperature, and eliminate any areas where bacteria, debris, or other outer matter collects.

The water passes into the pump through a strainer, which removes large debris. Then the water passes through a filter where dirt particles and impurities are removed - physically cleaning the water.

Water Flow Pattern:

There are four water flow processes that occur during the normal operation of the recirculation system. These processes are essential to the maintenance of the pool water quality and maximization of disinfection efforts. These water flow processes are filtration, vacuum cleaning, backwashing, and pool filling.

Filtration: Filtration is defined as the act of removing bacteria, viruses, and suspended matter from the water bypassing the water through a porous substance (filter). This process occurs when the recirculation system is in operation and usually defines the process.

- **Vacuum cleaning** – The purpose of vacuum cleaning is to remove large debris from the pool sides and bottom and provide a clean-looking appearance. The pipes leading from the main drain and gutters are throttled down or shut off, and the pipe from the vacuum fitting is opened permitting the pump to pull through this pipe. The vacuum cleaner is attached to the vacuum fitting, which then removes dirt from the pool and carries it to the filters along with the swimming pool water. The vacuum cleaner relies on the vacuum action of the suction side of the piping to accomplish this cleaning.
- **Backwashing** – During the backwashing process, pool water is withdrawn from the pool as it is for the normal filtering operation, but the flow is reversed through the filter and the accumulated dirt is forced out of the sand and discarded.
- **Pool filling** – Pool water lost through drainage, evaporation, backwashing, splashing, or other means of depletion is being added through a freshwater supply.

Steps for backwashing:

- Turn off pump
- Manually close the appropriate valves for reversal of flow or turn an automatic control valve to the backwash position.
- Turn the pump on and allow it to run until water appears clean as seen in the sight glass.
- If it is a manual system turn the pump off then an automated system is utilized, turn the automatic control valve to the rinse position. Turn the pump on for 20-30 seconds to reset the sand bed and send any dirt residue to the waste line. Shut off the pump.
- Manually adjust the appropriate valves for filtration or return the automatic control valve to the filter position.

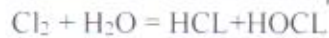


- Turning the pump back on resumes the filter cycle.

Swimming pool water purification:

- **Chlorination:**

Chlorine is one of the most widely used disinfectants because it's relatively inexpensive, commonly available, and a very good disinfectant at low concentrations (1.0 to 3.0 ppm). Chlorine acts as an oxidizer which is a type of compound that chemically "burns" away from other compounds such as bacteria, fungi, viruses, and algae. When chlorine is added to pool water, it reacts as follows:



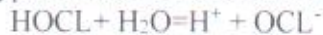
Cl_2 = Chlorine

H_2O = Water

HCl = Hydrochloric Acid

HOCl = Hydrochlorous Acid

The Hypochlorous acid further reacts with water to form the following:



Hypochlorous acid in its molecular form (HOCl) is a potent bactericide but as it breaks down into its ionized form, it becomes much weaker. In fact, the ionized form of Hypochlorous acid is 100 times slower than the molecular form. To achieve satisfactory disinfection of pool water, the Hypochlorous acid needs to remain in its molecular form. This can be controlled by regulating the pH of the pool water.

Pool water with a pH below 7.0 will provide a greater rate of disinfection than pool water with a higher pH. Unfortunately, operating a swimming pool with a pH below 7.0 will cause problems for swimmers as well as for pool maintenance. The pH of the human eye is 7.4 and water with a different pH will cause swimmers to experience burning and irritation to their eyes. Low pH, below 7.0, will also cause coagulants used in sand filters to dissolve, will cause pipes to corrode, will etch the surface and grout of swimming pool interior surfaces, and will encourage algae to grow. It is for these reasons that pool water should be maintained at a pH of 7.2 to 7.8 with the optimum pH being 7.4. The effectiveness of chlorine is diminished to about 50%.

- **pH Control:**

- The act of chlorination, as well as the type and concentration of chlorine or other disinfectant used, swimmers load, and weather conditions, can impact the pH of the pool water. Temperature does not directly affect pH. From time to time, it may be necessary to add additional chemicals to the pool water in order to return the pool pH to the recommended 7.2 to 7.8.
- Chemicals used to maintain pH include sodium bi-sulphate, CO_2 (carbon dioxide), and muriatic acid. The addition of chemicals to alter pH should not be used until the other chemical parameters of the swimming pool have been brought into the normal operating range.
- Excessive or insufficient disinfection will cause pH values to fluctuate from the desired range and premature correction of pH will cause an overcorrection of pH problems.



The Saturation Index:

The temperature factor, calcium factor, and alkalinity factor chart below -

| Temperature (Degree F ^o) | Temperature Factor | Calcium Hardness (ppm) | Calcium Factor | Total Alkalinity (ppm) | Alkalinity Factor |
|--------------------------------------|--------------------|------------------------|----------------|------------------------|-------------------|
| 32 | 0.0 | 5 | .3 | 5 | .7 |
| 37 | 0.1 | 25 | 1.0 | 25 | 1.4 |
| 46 | 0.2 | 50 | 1.3 | 50 | 1.7 |
| 53 | 0.3 | 75 | 1.4 | 75 | 1.9 |
| 60 | 0.4 | 100 | 1.5 | 100 | 2.0 |
| 66 | 0.5 | 150 | 1.6 | 150 | 2.2 |
| 76 | 0.6 | 200 | 2.9 | 200 | 2.3 |
| 85 | 0.7 | 300 | 2.1 | 300 | 2.5 |
| 94 | 0.8 | 400 | 2.2 | 400 | 2.6 |
| 105 | 0.9 | 800 | 2.5 | 800 | 2.9 |

Testing:

Points to be remembered: -

Read and follow the directions for the test kit available with the swimming pool operator. Any errors in conducting the tests and the way they are designed to be done may cause drastic changes and inaccuracies in the results.

- Always clean the tubes or test kit before and after each use to ensure they are free of any chemical residuals for the next test.
- Always take the water samples from 12-18 inches below the surface of the pool. This ensures a representative sample of the swimming pool water and prevents contaminants from floating on the surface from interfering with the test.
- Do not take samples from corners or directly from in front of return lines. In the case of corners, these tend to be dead spots with poor circulation and not indicative of the rest of the pool water. With return lines, the water is just returning from the filter and chlorinator and will tend to give an elevated chlorine residual.
- Swimming pool test kits are not 100% accurate. They are simply tests meant to provide close estimations for the actual levels. However, always use fresh reagents. All reagents should be replaced at the beginning of each new season. Old reagents do not react properly and will give inaccurate results. Also, protect and maintain the reagents and kits during the season. Sun and heat can drastically age and weaken reagents. Try to keep them in a cool, dry, and dark place whenever they are not in use.
- Test the swimming pool water frequently. Chlorine and pH levels should be checked every day before the pool is opened. After that, they should be checked every two hours.



It is important to remember that the more often swimming pool water is tested, the more quickly, safely and easily improper levels can be corrected. Other chemical levels such as total alkalinity, calcium hardness, and stabilizer (cyanuric acid) must be checked weekly.

- Always put the caps on the comparator tubes when testing. Do not use your fingers to cover them. Small amounts of chemicals on your fingers can dramatically affect the sample and give you faulty results.
- Keep records of the tests you run and the results.

Keeping Records:

- Free chlorine residual or the equivalent, must be taken at the time of the swimming pool opening, and every two (2) hours thereafter until the swimming pool is closed for the day.
- pH tests must be taken every 2 hours.
- Weather factors, temperature, degree of cloud cover, wind velocity, and any other factors.
- Swimming pool recirculation flow meter readings at the opening and at closing times and before and after any changes in filter operation.
- Amount of new water added, and the reason, why it was necessary?
- Water temperature at the opening and closing times.
- Recirculation pump stoppage with an explanation of the reason. Record how long it was stopped?
- Amount of disinfectant added (i.e. chlorine).
- Amount of any other chemical added (i.e. soda ash, acid, etc.).

(NOTE: Always follow the manufacturer's instructions when mixing chemicals with water, and never add water to a container of acid or base. Instead, add the acid or base to the container of water).

Place: Majhitar, Rangpo

Dated: June 2024



[Prof (Dr.) G L Sharma]
Director

Prof (Dr) G.L. Sharma
Director
Sikkim Manipal Institute of Technology
Majitar, Rangpo - 737138
East Sikkim (Sikkim)

To,

1. All Associate Directors
2. All HODs/HOOs
3. All Hostel Notice Board
4. MARENA all Notice Board
5. Suchana (Faculty and Students)

References:

1. *Swimming SOP_0.pdf*. (n.d.). Retrieved June 20, 2024, from https://yas.nic.in/sites/default/files/Swimming%20SOP_0.pdf
2. *What is water quality management – and what goes into it?* (n.d.). Retrieved June 20, 2024, from <https://www.solitudelakemanagement.com/what-is-water-quality-management-and-what-goes-into-it/>
3. *FIRST DISTRICT HEALTH UNIT*. (Public. Health). Jan 2009.
4. *SOP-GYM.pdf*. (n.d.). Retrieved June 20, 2024, from <https://pssemrschool.com/wp-content/uploads/2023/05/SOP-GYM.pdf>
5. *SOP for Operating and Cleaning of Distilled Water Unit: Pharmaguideline*. (n.d.). Retrieved June 20, 2024, from <https://www.pharmaguideline.com/2008/05/sop-for-operating-and-cleaning-of.html>

Prof (Dr) G.L. Sharma
Director
Siklim Memorial Institute of Technology
Major, Rangpo - 737138
East Sikkim (Sikkim)