**2020-2021 Mars Desert Research Station Application Instructions and Information**

**Please read through this document carefully and follow all instructions. Failure to follow instructions may result in your application not being considered.**

Greetings! Thank you for your interest in participating as a crewmember at the Mars Society’s Mars Desert Research Station. We welcome applications from individuals who would like to be placed with a crew of compatible analog astronauts and from self-organized teams who would like to come to MDRS together. If you apply as a team, please read the following guidelines for self-organized crews and meet them as much as possible.

Please read through this application carefully as some procedures have changed since last year.

1) All individuals, as well as members and alternates of self-organized teams, must complete the crew application by the application deadline.  The priority deadline is October 1, 2019 and final deadline for consideration is February 1, 2020. Crew selection will begin shortly after the priority deadline, and any application received after that date will be given consideration on a space available basis only. It is in your best interest to get your application in before the priority deadline as competition for crew spots is far greater than in the past.

2) External directors may apply on behalf of a team. External directors may be supporting an educational team made up of students from a single department and/or course, organizing a team from a particular country, region or organization, or developing a research project requiring a single crew to complete. If you want to apply as an external director, please contact us for additional guidelines prior to completing your application (email [srupert@marssociety.org](mailto:srupert@marssociety.org). Be aware that any crew accepted into the MDRS program as part of any group with an external director will still be required to comply with all of the MDRS programs regulations and protocols. MDRS does not “rent” the campus to other groups.

3) Please use the following information as a guide for which positions you qualify for as a crewmember at MDRS. Only apply for those roles for which you qualify. Please note that you are only applying for these roles, and they may be changed at the discretion of the MDRS management team.

Commander: The Commander gets the glory, but they are also responsible for the overall safety, organization and management of the mission. This means that they need to be in charge from the inception of the mission, by working on the planning and development of the crew’s goals and how to accomplish them. They are responsible for the crew’s logistics before, during and after the mission, although sometimes they turn some of those responsibilities over to the XO. The commander is the person held accountable for all things related to the mission, and is in command of all things while at MDRS, although they still need to respect the overall authority of MDRS staff and the HSO in health and safety matters. Commanders preferably will have prior successful MDRS experience, but can also have gained their leadership skills in their own field and/or via school and field experience. Commanders must have demonstrated leadership and experience in remote or challenging field areas.

Executive Officer (XO): The XO’s role shifts slightly depending on the style of leadership used by the Commander. Often XO’s are in charge of the logistics prior to a mission and the day-to-day schedule while at MDRS. Not all crews require an XO and an XO should never be selected simply because a person has no other role they can fill. The XO needs to be able to deal fairly and justly with all crewmembers and support the Commander’s decisions in overall mission planning. An XO should have prior logistic skills and experience in small group leadership.

Health and Safety Officer (HSO): The role of the HSO is dependent on the applicant’s skill level. They must have, at minimum, current first aid and CPR training and they must provide proof of this prior to their crew’s arrival at MDRS. First responder training is preferred and EMT’s, nurses and doctors are highly desired. This position is also responsible for the operational safety of the crew and the campus.

Crew Engineer: The role of the Crew Engineer is the most misunderstood of all the positions at MDRS. The Crew Engineer is responsible for the maintenance and monitoring of the station, its buildings and systems. The person in this position has to think proactively and be able to think like a Martian in terms of active response to the physical environment at MDRS. In order for daily activities to proceed as scheduled, the crew engineer needs to routinely monitor the equipment being used by the crew and make sure it is ready for whatever is planned. In addition, when systems fail, the crew engineer needs to diagnosis the problem and contact Mission Support with a plan for solving the problem. While the Crew Engineer generally has an engineering background, experience proactively maintaining functionally of a large facility and/or project is more important that actual engineering skills.

GreenHab Officer: This person is responsible for keeping the crops alive and thriving in the GreenHab, as well as the overall maintenance and monitoring of the GreenHab’s environmental controls. GreenHab Officers can have experience in biology and/or gardening. Experience growing plants in a greenhouse and greenhouse management is highly desired. At a minimum, the GreenHab Officer must be committed to maintaining the crew crops with dedication to their survival and documentation of harvest. To qualify as a GreenHab Officer, the person must take and pass the GreenHab Exam for GreenHab Officers before their arrival at MDRS.

Crew Scientist, Crew Geologist, Crew Biologist: The role of a scientist on the crew is to conduct research and maintain the ScienceDome and its equipment. They generally plan the crew’s EVAs based on their research goals. They must have a pre-approval of their home institution for any studies done at MDRS. This is particularly important if the scientist is studying human factors. All human factors research is required to be approved by the home institution’s IRB, even if it doesn’t require an IRB. In that case, simple proof that it was reviewed and an IRB was not deemed necessary is all that is needed for the research.

Crew Astronomer: The crew astronomer must have both experience using a telescope and a research project that has been approved by the MDRS Astronomy Team. They will work with the director of observatories prior to their arrival at MDRS and must take an online test in order to operate the observatories.

Crew Journalist: The Crew Journalist is responsible for the daily reports and photos sent from MDRS. This included a daily Journalist Report that is a record of your crew’s daily life, but also they should be the organizer for the crew’s media efforts.

Crew Artist/Artist in Residence: We welcome student and professional artists in all disciplines, including but not limited to fine art, graphic art, photography, film, journalism, and writing. In order to qualify as Artist-In-Residence, you must demonstrate that you make your living in that field and the final decision on whether that person qualifies as Artist-in-residence belongs to MDRS.

There is of course flexibility in each of these roles and you are also invited to propose another role for yourself based on crew need and/or experience and education.

3) Please use the following information as guidelines for developing a self-organized crew. Self-organized crews must meet these guidelines in order to be selected for a rotation. If you have any questions or concerns, contact us.

Please note that self-organized crews can consist of between 6-7 people. Six is a fully functioning crew. Please indicate the number of people in your team on your application. **Guidelines for self-organized crews will be strictly enforced. If you do not meet these guidelines you must address why you don’t and how you will solve the loss of that component of your crew**.

Guidelines for self-organized crews:

* All must be healthy people, used to outdoor activity such as hiking and camping. They should all be people capable of eating all normal types of food.
* At least three of the crew must speak English well. At least one must be fluent.
* All teams from a single university must have a faculty advisor who will assist the team with their research proposals and also be available to the crew and Mission Support during their stay at MDRS. This person must write a letter of commitment to the rotation that must be submitted with the team’s application.
* At least two of the crew should be natural scientists or natural science students. This is because the activity of the crew will be field exploration. If a crew does not have anyone who can fill the role of field scientist, along with their application they should submit a plan outlining the plan and purpose of their field activities.
* At least two members of the crew should be people who are very good at fixing mechanical or electrical equipment. This is because in the desert things frequently break down and a crew needs to have some ability to deal with such events.
* At least one of the crew should be a person capable of expressing himself or herself well in writing and be willing and able to send an account of each day's activity for publication on the Internet.
* One of them must have the maturity and judgment and experience to serve as crew commander. In order to be commander of a self-organized crew, the applicant must meet one of the following criteria:
  + Must have served satisfactorily as crew commander in a prior field season
  + Must have served satisfactorily as a crew member in a prior field season and show previous leadership experience in their field
  + Must have served satisfactorily in a leadership role in a field expedition and/or a remote location
* All crew commanders will be screened and approved by the selection committee prior to assignment.
* One person should have some medical experience, either first aid/CPR or wilderness first responder. Another person will need to have experience or an interest in managing crops in the GreenHab.
* One person should be reasonably knowledgeable with computer and network operations, specifically wired and wireless connectivity, router configuration and basic network commands.
* All should be people enthusiastic about space exploration in general, and Mars exploration in particular.
* All of them must be serious, responsible people. No people should be sent who like to do dangerous things for fun, or who are not careful with other people's property, or who are otherwise excessively immature.
* All crewmembers will need to spend two weeks at the station, arriving and leaving together. At least two of them should be able to drive a car legally in the United States.
* You need to choose a crew of people who can get along and work together well. There must be a minimum of six people on your main crew. You are STRONGLY encouraged to have 2-3 alternate crewmembers. They will need to fill out an application as well. We will no longer approve an alternative crewmember after the selection process. If you find you need a replacement crewmember, it will be at the discretion of the Crew Selection Committee on who is assigned to your crew.
* The crew must all understand that they need to follow orders given to them by Mars Society’s Mission Support. We do not direct all the crew's activity. Much of their research program, for example, will be self-generated. But when we tell them they need to do something, or that they must not do something, they need to follow instructions. Crews that do not follow directives from Mission Support, and in particular the Director, will be removed from the station at their own expense.

**MDRS Crewmember Fees**

**Field Season 2020-2021**

Every participant is expected to pay their deposit of $250 per person or a minimum of $1500 per crew no later than six sixty days after being awarded a crew spot. Crew fees must be paid in full sixty days after that date. If these fees are not paid, your rotation may be assigned to another crew.

Standard crew fees are below.

Professional fees are $1000 a week or $2000 for a standard two-week rotation.

Recent students (will require proof of graduation within one year of rotation) pay $750 a week or $1250 for a standard two-week mission.

Students who qualify will pay fees of $500 per week or $1000 for a standard two-week rotation.

Crews with less than 6 participating crewmembers at the time of their rotation will still be required to pay a fee of $250 for each missing crewmember. In addition, crew members who do not show up for their rotation will forfeit their $250 deposit.

All applicants can qualify for an up to 50% reduction in fees by volunteering for either MDRS or the Mars Society prior to their rotation. If you would like the opportunity to qualify for this reduction please contact Shannon at [srupert@marssociety.org](mailto:srupert@marssociety.org) for details. Fee reduction opportunities may be limited depending on the number of participants, so please contact Shannon as soon as you have been assigned a crew for best opportunity.

Included in the participation fee paid to The Mars Society is:

- Transportation by car to and from Grand Junction, Colorado

- All food and beverages provided during your time at MDRS

- Water, heating, electrical power at MDRS (except batteries)

- Use of science and engineering and general equipment, etc., rovers, and MDRS vehicles per established protocols

- Use of EVA spacesuits

Not included in the participation fee:

- Fuel for the trip from Grand Junction to MDRS and the return trip to Grand Junction. (160 miles one-way)

- Costs of two hotel nights for the overnight stay on Friday night before your rotation and Sunday night after your rotation.

- Cost of any hotel stay in Hanksville except as approved by the Director in an emergency

- Any medical expenses incurred as a result of your participation

- Travel expenses from your home to Grand Junction and back.

-Transportation expenses for crewmembers whose travel plans are different than the majority of the crew from Grand Junction.

- Meals not consumed at MDRS.

In order to qualify as students, applicants must be full-time students in a degree-seeking program at an accredited institution of higher learning. Students must send proof of their educational status to the Mars Society one month prior to your rotation or when requested. Failure to be pro-active about this may result in you being assessed a professional rate. For a crew that all attend the same university, a single letter from the registrar or the department chair will suffice as proof. Other documents we will accept are a current unofficial transcript and a letter from the registrar or a university for a single individual. These documents must be in English.

Recent graduates are also eligible for a reduced fee. In order to qualify, recent graduates must send proof that they have finished school within one year of their rotation at MDRS. It must be clear from the paperwork provided that this requirement has been met. These documents must be in English.

A $250 deposit will be due from each participant within sixty days of notification of crew selection ($1500 for a six-person crew). This deposit will be refundable after your rotation provided your crews does not damage, destroy or willfully mismanage MDRS facilities and resources. This also includes the understanding that if they do not leave the station clean and organized for the next crew, each crewmember will be charged a cleaning fee. This deposit will not be refunded should the crewmember not attend their crew’s rotation.