

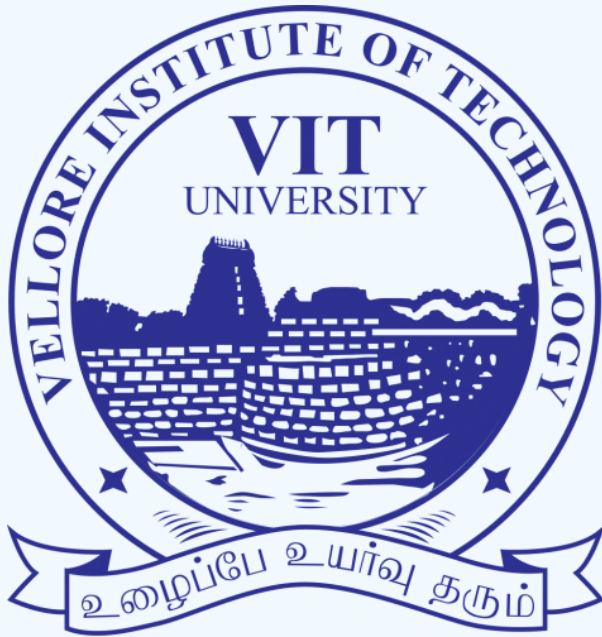
University Rover Challenge

2019

CONCEPT NOTE



ABOUT VIT



Vellore Institute of Technology (VIT) was established as a self-financing institution in 1984 by Dr. G. Vishwanathan with the vision of providing quality education on par with most world-class institutions. The campus in itself has a highly diverse culture as the students belong to varied backgrounds coupled with a slew of experienced and knowledgeable faculty and staff who are a constant source of pride for us. The global level of competition set for us by the institute and the emphasis towards research driven initiatives gives us the opportunity to excel in several platforms of education.





ABOUT SEDS VIT

Students for the Exploration and Development of Space (SEDS) is a nonprofit student chapter that was founded at MIT, USA. In India, SEDS is headquartered at **SEDS VIT**.

The **SEDS VIT PROJECTS** is the engineering division under SEDS-VIT whose members have worked on various project groups like Blimp, SUAS, RC-Flyer, Rubik's cube solver, CanSAT, European Rover Challenge and SpaceX's Hyperloop. This committee is a group of undergraduate students who take up applied engineering challenges in India and abroad. The mission is to provide a platform where students can learn, work and excel in their technical knowledge.



TEAM VYADH

Team Vyadh was the first rover team of SEDS India. The team comprises of 38 undergraduate engineering students from mechanical, electrical, software and managerial branches. Over the past three years, Team Vyadh had been continuously developing its Mars Rover design to increase the rover's functionality and improve the efficiency of on-board control to perform servicing tasks and communication systems to help it traverse through rugged terrains.

TEAM VYADH MEMBERS



ABOUT URC 19

The **University Rover Challenge (URC)** is a part of rover challenge series powered by The Mars Society located at Lakewood, Colorado, USA, a non-profit organisation spreading awareness of benefits of exploring mars. URC is a pre-eminent technical competition for undergraduate students all around the world. It challenges students to build remotely operated rovers that can accomplish a variety of tasks that might one day assist astronauts working on the surface of mars. The competition was started in the summer of 2007 in USA and has been held each year.

Participating in **URC'19** gives us the opportunity to make an impact on the technology required for mars exploration. It gives us a chance to improvise our model to meet the technological advancements happening each year.

COMPETITION TASKS

Science Mission: The goal of this task is to check whether the rovers are equipped enough to investigate a site for the presence of current or past life

Delivery Mission: This task requires the rover to pick up a certain equipment then traverse through a rugged terrain, which is loaded with obstacles, to deliver it thus helping astronauts in the Martian terrain

Equipment Servicing Mission: In this task the rover will be required to perform dexterous service operations using a robotic arm on a mock lander

Autonomous Traversal Mission: This task requires the rover to autonomously cross rough patches, dodge slopes and obstacles, survive vertical drops and hence reach the destination to locate a marker

WHEN AND WHERE ?



MAY 30TH – JUNE 1ST, 2019



CONTACT US

For more information regarding SEDS VIT contact:

TEAM CAPTAIN

Pranjal Jalota | +917530004412 | pranjaljalota.sedsvit@gmail.com

PROJECT MANAGER

Kshitija Sonavane | +918190011109 | kshitija.sedsvit@gmail.com

