

# **Students Union Technical Challenge**

Under this initiative the Students' Union will provide financial assistance for various technical activities undertaken by First degree students. This has been divided into three categories:

1. Problem Statements provided by the Technical Secretary.
2. Ideas proposed by interested individuals/teams.
3. Funding for Teams Participating in National/International competitions representing BITS-Pilani Hyderabad, Campus.

## **Category 1 & 2**

### **Eligibility**

- I. Any student currently I, II, III&, IV (only dual degree) year of First degree program are eligible to participate.
- II. Students can participate in teams of 2 to 5 members.
- III. Students part of any Club/Society represented at Tech Senate (Mentioned in Appendix B) should apply through the club/Society.

### **Timeline**

Problem Statements Released	20 <sup>th</sup> January 2020
Registration Deadline	24 <sup>th</sup> January 2020
Project Plan Submission	28 <sup>th</sup> January 2020
Presentation of Detailed Plan	30 <sup>th</sup> to 7 <sup>th</sup> February 2020
Result of Approved teams	16 <sup>th</sup> February 2020
First progress Update	26 <sup>th</sup> February 2020
Second progress presentation	19 <sup>th</sup> March 2020
Final presentation	5 <sup>th</sup> April 2020

## **Project Plan should contain**

- Details of team Members, brief description of past projects (if any) Detailed explanation of problem statement.
- Timeline of project
- Bill of materials (Provide links from online stores or quotation received from vendors).
- Methodology (explain all the aspects of the project. Do specify all main components of the project.)
- Circuit Schematics (If any).
- CAD designs (If any).
- Project Plan should be text document (may add images) in PDF file mailed to [tc@hyderabad.bits-pilani.ac.in](mailto:tc@hyderabad.bits-pilani.ac.in).

## **Terms and Conditions**

1. Teams not following deadlines will be disqualified.
2. Any team found not dedicated enough can be disqualified at any point of time.
3. Equipment and Tools bought for the project after completion have to be submitted to the Technical Secretary, if the project is incomplete. Completed projects can be retained after receiving a consent.  
Teams, as individuals or from clubs/societies' of Technical Senate, they can retain that with them, if the project is completed.
4. Teams shall give the progress report whenever asked for, irrespective of the deadlines.
5. All decisions taken by the Technical Secretary will be considered final.

**List of the Problem statements can be found in Appendix A.**

## **Registration**

To register fill this [form](#).

## **Category 3**

Teams Participating in National/International competitions representing BITS Pilani Hyderabad, Campus can request Students Union for Partial/Complete Financial Assistance.

- There is no Deadline under this category.
- There is no limit of amount under this category.
- To apply Team Head may send a proposal mentioning all the details (same as Category 1&2).
- The proposal should be sent to [tc@hyderabad.bits-pilani.ac.in](mailto:tc@hyderabad.bits-pilani.ac.in) and CC: [president@hyderabad.bits-pilani.ac.in](mailto:president@hyderabad.bits-pilani.ac.in).

## **Appendix A List of Problem Statements**

- 1. Two wheeled (Segway) Indoor navigation robot**
- 2. 3/4/5 Degree of freedom Robotic arm/Motion Mimicking arm**
- 3. Gesture Controlled Hovercraft**
- 4. Rubik's cube solver.**
- 5. Make your own 3D printer**
- 6. Autonomous vehicle that can travel from Mess to Acad Block**
- 7. Surveillance system for the library**
- 8. Travel assistant for blind with dynamic user input for location based alerts.**
- 9. Sign Language to Text/Speech converter**
- 10. Chatbot that can answer basic queries**
- 11. Musical Tesla Coils**
- 12. Ornithopter(Advanced Variations)**
- 13. Quadrupeds(Any Variation)**

## **Appendix B**

1. Currently recognized Technical Clubs include:
  - a. Coding and Programming Club (CRUx)
  - b. Automation and Robotics Club (ARC)
  - c. Wall Street Club
  - d. Astronomy Club (Ad Astra)
  - e. BITS Hyderabad Consulting Group
2. Currently recognized Technical Societies/Chapters include:
  - a. Institute of Electrical and Electronics Engineers (IEEE)-
  - b. Society of Automotive Engineers(SAE)

**Source: ATMOS Charter Section: 9**