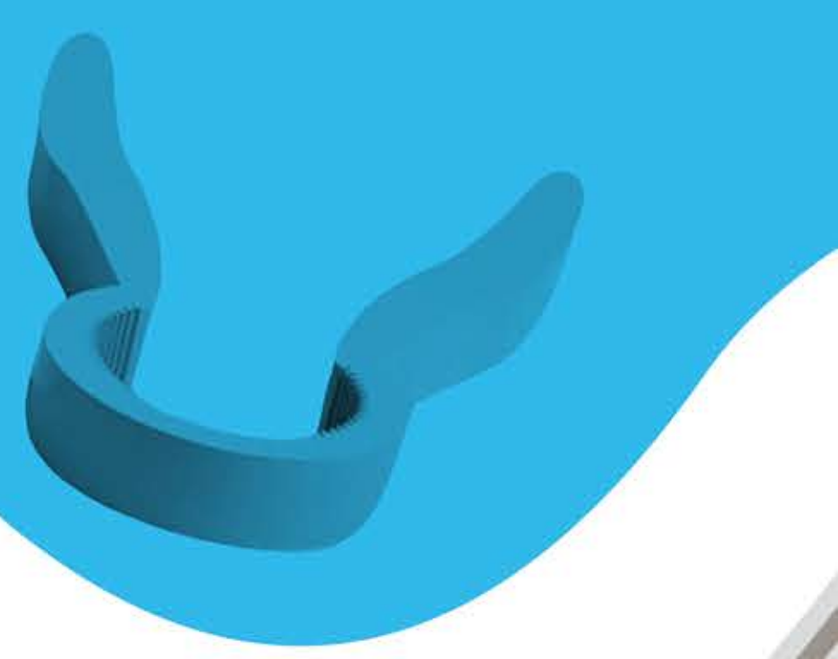
FAB LAB EL PASO

presents

PARALYMPIC MAKE-A-THON



Challenge Guide 2023

Paralympics Make-a-thon

Assistive/Adaptive Devices Challenge

The paralympic assistive and adaptive device Make-a-thon is an event aimed at designing and developing new technologies, equipment, and devices to help athletes with disabilities participate in cycling, swimming, and running competitions. The goal of the Make-a-thon is to increase accessibility and inclusion in sports for El Pasoans with different abilities while fostering creativity, innovation, and STEM skills for the community. **This year, we will be working for end user, Juaisca Rodriguez, a para-athlete who represented the Venezuelan Paralympics team and is hopeful in qualifying to represent the United States. Juaisca came to Fab Lab looking for an assistive device that would aid her in the bicycling portion of the triathlon.**

Teams of student and professional designers, developers, engineers, and individuals from various fields will come together to brainstorm, create, test, and present their inventions over a three-day period. The Make-a-thon comprises several stages, including ideation, prototyping, testing, and presentation with opportunities for feedback from Juaisca and Fab Lab mentors that will provide guidance and technical support throughout the event. Participants will also hear from professionals in the fields of Bike Fitting and Kinesiology.

At the end of the Make-a-thon, each team presents their invention and competes for recognition and awards based on criteria such as functionality, innovation, creativity, and impact on the athletes' lives. **The winning overall design will be developed, refined, and potentially used by Juaisca during national and international para-athletic competitions.**

Agenda

April 20-23

Thursday - Kick off event

6:30p Welcome and event overview
Juaisca Rodriguez, para-athlete meet and greet

7:30-8:00p Mixer and group selections

8:00-10:00p Brainstorming and ideation

Friday - Working day

3:00p Lab opens

6:00-6:45p Dinner break with Joseph Garcia, Owner of Cycling Gains

6:45-9:00p Working session

***8:00p** *last call to send files to 3D printers for overnight printing*

Saturday - Working day

12:00p Lab opens

1:00p Lunch and learn with Dr. Bryan Boyea, Assistant Clinical Professor for UTEP Doctor of Physical Therapy Program

2:00p-6:00p Working session

***5:00p** *last call to send files to 3D printers for overnight printing*

Sunday- Presentations and Awards

12:00p Lab opens

2:00-3:30p Introduction to guest judges
Presentations and judging

4:00p- Awards ceremony

Judging Rubric

The purpose of this rubric is to evaluate projects submitted by participants in the Paralympics Make-a-thon. The judging criteria will focus on creativity, innovation, and usability. The judges will evaluate the projects based on the following categories.

1. Innovation (35%):

Innovation refers to the originality and creativity of the project's design. Participants should demonstrate a clear understanding of the problem and show how their solution is original in its application. The project should demonstrate a new approach or use of technology to address the specific needs of athletes with disabilities.

2. Functionality/Feasibility (30%):

Design/functionality is the ability to provide solutions that are both usable and effective. Projects should be designed to meet the specific needs of athletes with disabilities and maximize their performance potential. Participants need to demonstrate that their projects can not only solve the problem but also be practical and effective in real-world scenarios.

3. Impact (20%):

Impact refers to the positive social impact that the project can have. Participants should demonstrate how their project can help improve the lives of athletes with disabilities, promote inclusivity, and create a more accessible and equitable world.

4. Presentation (15%):

Presentation refers to the ability to articulate and communicate the project's ideas and relevance effectively. Participants should demonstrate their ability to concisely and persuasively present their project's benefits, features, and limitations. Please keep in mind, this is not a business pitch.

Rules

1. Teams must consist of at least two members and a maximum of five. Each team must designate a team leader to communicate with the event organizers and all team members must be registered to participate. If you don't have a team, you can still sign up as a single participant

2. The make-a-thon will take place over a 3-day period, during which teams will work on their prototypes. Please see the agenda for more details.

3. The use of any pre-existing technology or software is allowed, but it must not constitute more than 50% of the final product.

4. Teams are responsible for bringing their own laptop and specialty materials. However, low-fidelity prototyping supplies will be provided such as cardstock, cardboard, general hardware, and 3D printing filament.

5. Judging will be based on innovation, functionality/feasibility, impact, and presentation of the final product. Please see judging rubric for more details.

6. To assure fairness, each team must work on their prototype during specified periods and present their prototype to the judges and audience within the allotted time frame.

7. Any violation of these rules will result in disqualification from the competition.

Code of Conduct

1. Respect your fellow participants and their ideas. Do not discriminate or make derogatory comments based on race, gender, sexual orientation, religion, or disability status.

2. Work as a team and communicate effectively. Everyone's input is essential to the success of the project.

3. Use appropriate language and behavior for a classroom/workplace setting. Any form of harassment, bullying, or inappropriate conduct will not be tolerated.

4. Use resources responsibly and ethically. Do not copy or plagiarize other people's work without proper attribution.

5. Represent yourself and your team with professionalism. Dress appropriately for an event that will be documented.

By participating in this event, you agree to follow the rules and code of conduct listed above. We wish each team the best of luck and look forward to seeing the creativity and innovation that arises during the Paralympics Make-a-thon.

Contact

Please email info@fablabelpaso.org if you have any questions.