You may have run across tractor pulls at county fairs. To make those tractors do what they do requires much time, design changes, tinkering and money. The American Society of Biological and Agricultural Engineers (ASABE) Quarter-Scale Tractor Student Design Competition is an international contest for college students. Students from the United States, Canada, and as far away as Israel have competed to show that they have the best design, not only on paper, but on the track as well.

The UNI Panther Pullers team consists of about 16 students. Most are Manufacturing Engineering Technology majors. There are a few other majors represented including Accounting and Education. The almost 100% Iowa-Native team has students ranging from freshman to senior. Put this all together and you have a diverse group of students with similar interests and one goal – to build a machine of power and agility.

Quarter-Scale teams are provided with a 31 HP Briggs and Stratton engine and a set of tires. The rest is up to their ideas and ingenuity. They must design and build a complete tractor. The design must be kept within the set parameters such as weight and length. The tractor must be on the road in late May to Peoria, Illinois for the 2018 competition set for May 31 to June 3.

The teams are evaluated by judges in three areas. First a detailed report showcases the innovation, manufacturing ability, serviceability, safety, sound level, and ergonomics of the tractor. Next the team gives a formal presentation to industry experts. Finally, the fun part. The tractor must pull a weighted sled three times down the track, complete a maneuverability course and finish a durability course. The team with the most cumulative points, wins the competition.

2017 marked this event’s 20th year. But this is the first year that UNI students have decided to pull together a team and build one of their own. Starting from scratch and competing against seasoned pros such as previous champions Purdue, Nebraska and Kansas State can be daunting. This will be no easy task for these Panthers but they are up for the challenge.

For the Panther Pullers the year-long project goes beyond planning, designing and building. The team also has to fundraise to acquire the necessary parts, such as brakes and a steering wheel. The team has a fundraising goal of about $10,000 to cover costs of parts, tools, and travel expenses. In kind donations and professionals willing to provide some are always welcome. Follow the team’s progress on their Facebook page (https://www.facebook.com/pantherpullers/).

**Team Roster**

Jacob H.: Accounting & Finance, Waucoma
Jordan T.: Manufacturing Engineering Technology, Cherokee
Aaron: Manufacturing Engineering Technology, Fort Dodge
Michael: Manufacturing Engineering Technology, Shell Rock
Jordan K.: Manufacturing Engineering Technology, Cedar Falls
Noah: Manufacturing Engineering Technology, Dyersville
James: Manufacturing Engineering Technology, Waverly
Jeff: Manufacturing Engineering Technology, Reinbeck
Logan: Manufacturing Engineering Technology, Bloomfield
Austin: Technology Management, Cedar Rapids
Alex: Manufacturing Engineering Technology, Ely
Kyle: Manufacturing Engineering Technology, Bettendorf
Dylan: Technology Management, Humboldt
Mark: Manufacturing Engineering Technology, Janesville
Jacob R.: Technology & Engineering Education, Atkins
Justin: Manufacturing Engineering Technology, Iowa, Texas & Italy

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