

Blue Jay Racing: Post-Intersession Update



Post-Intersession Highlight: 16XT Driving!

For the first time, our vehicle drove shortly after Intersession! This is the fastest we have ever produced a vehicle, and we would not have been able to do it without your support, donated machine time, materials, and funds. With our initial testing begun, we'll begin the process of testing, tuning and redesigning!



Our first tests of the 16XT at UMBC's practice field! This feat is the culmination of approximately 2,800+ man-hours of work over the month of January.



Our 4WD added strong hill-climbing characteristics and allowed us to take on our most challenging obstacles yet!

We are excited to move from our initial testing phase to a rigorous assessment of our designs via a suite of sensors and a DAQ unit we tested earlier this year, donated by [Mars Labs](#). With this information, we'll be able to close the design cycle and validate our loading conditions and suspension/drivetrain characteristics!

Sponsors Spotlight (1/2)

We would not have been able to able to make this progress without the help of several sponsors, especially [Central Precision, Inc.](#) and [Ridge Engineering](#) for laser cutting and waterjetting suspension and frame mounting components. These components formed our hubs, tabs, jigs and ensured that all the components of the 16XT stayed well located on the welding table and off-road!



The team with Lindsay Pinieski of Central Precision Inc. Their laser cutting helped us take our designs from CAD to the welding table accurately and rapidly!



Danko Arlington casting our CVT Backplate! Their 3D printed sand mold allowed us to create one of our lightest and most aggressively lightened backplates yet.

We'd also like to thank [Danko Arlington](#) for casting and hardening our CVT Backplate with their state-of-the-art 3D printed sand molds for our most aggressive geometry yet. This led to exceptionally light and robust mounting of our transmission— oftentimes it draws stares from other teams and design judges alike!

Sponsors Spotlight (2/2)

The team would like to thank [WSE Manufacturing](#) for machining our shafts, case, and post-machining some of the sprockets donated by [Ramsey Chain](#). This has enabled us to outfit the 16XT with a robust but aggressively lightened shifting system. With this capability, we'll be able to take on our most challenging obstacles yet!



Our transfer case and shafts machined by WSE Manufacturing, assembled together with sprockets donated by Ramsey Chain.



Outfitting the 16XT with seat belts and mounting tabs to ensure driver safety and comfort during competition.

We'd also like to thank [Extreme Terrain](#) and [Rislone](#) for their donations to the team, which helped us purchase critical safety equipment and brake hardware! This allowed us to test the 16XT in the most realistic conditions possible more rapidly than ever before.

New Members: Intersession Builds & Competition Preparation

During our 3 week Intersession, our new members learned how to operate workshop machinery and take designs from CAD to reality. From turning simple nylon bushings to welding together the complex geometries of the frame, they've almost gotten the full Hopkins Baja experience! Now we're looking forward introducing them and the 16XT to the rigors of competition in Tucson, Arizona!



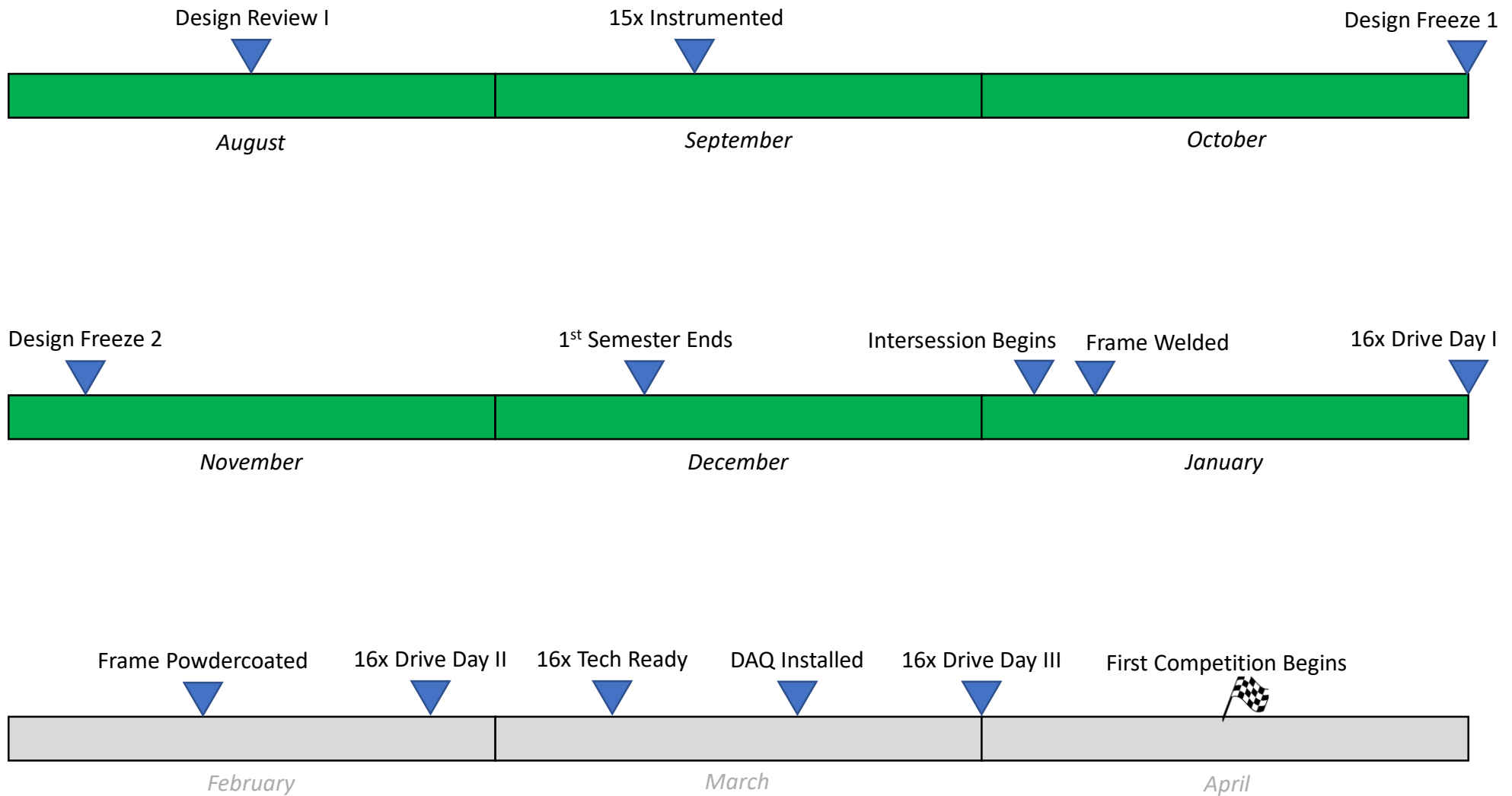
The team with the completed 16XT frame after the first week of Intersession!



New members begin timed maneuverability runs on the 11X to get off-road practice before competition.

Now with the 16XT driving, it's time to begin the process of attaching all the safety equipment, equipping the vehicle with strain gauges and other sensors, and begin testing! Our new members also began driving the 15X from last year to begin practicing off-road driving for competition. We can't wait to get them into the 16XT and onto the racetrack!

Timeline



Thank You for Your Support!

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