Casey Nichols is a graduate student pursuing a master’s degree in applied energy and electromechanical systems at the University of North Carolina – Charlotte (UNCC), in addition to his earned Bachelor of Science in Mechanical Engineering. His anticipated graduation date is December of 2019.

In summer 2019, Casey will intern for the second time through the IACMI – The Composites Institute Internship Program at the National Renewable Energy Lab (NREL), in Boulder, Colorado, under the mentorship of NREL Mechanical Engineer Ryan Beach. Casey’s will participate in the structural validation of 13m thermoplastic (TP) wind turbine blades. He will also be learning about international standards associated with full-scale wind blade testing. In addition, Casey will discover methods and capabilities of NREL’s testing facilities and implement new innovative test methods.

As part of his graduate studies, Casey is working on the university’s magnetic gearing research team, funded by the US Department of Energy, the UNC Coastal Studies Institute the North Carolina Space Grant program. As part of this team, Nichols has experience with designing and fabricating a modular magnetic gearbox for use in space applications.

Casey also spent ten weeks apart of the IACMI Intern Class of 2018 at the National Wind Technology Center, managed by NREL, in Golden, Colorado. He was tasked with designing and fabricating assembly fixtures for megawatt-scale wind blade spar cap and shearweb construction. The project required the use of two new fixtures which were bonded together and used to support large composite structures.

“I have a strong interest in all forms of renewable energy for my career focus,” he said. “Getting significant hands-on experience, and making contacts in the field, is a combination that is hard to beat.”