

Physics Department ABET Accreditation Process Update

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- Obtain ABET accreditation by summer 2026
- At least double enrollment, and increase retention & graduation numbers
- 1+ internship experiences for every Engineering Physics student
- 100% placement rate

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- ❖ **Curriculum and Staffing**
- ❖ **New Capital Equipment & Engineering Infrastructure**
- ❖ **Student Centered Goals & Deliverables**
- ❖ **Fund Raising Goals & Achievements**

The whole Physics Department Staff and our Alumni Working Group appreciate your help thus far and look forward to your continued interest and support!

Naveed & Jeff



One of our first steps in this journey was to bring on Professors who were experienced in the development and implementation of the curriculum necessary to fulfill the Engineering Degree requirements. We are pleased to introduce Cory Gloeckner PhD, who joined the department in 2022 and Ben Grossman-Ponemon PhD who joined in 2023.

To make this program happen, we need to upgrade our equipment and add more space. The University has recently announced that the Physics Department will receive an **additional 1,300 Sq. Ft. of space** in the Dolan Center for the expansion of the Engineering Physics program. This new space will help support new research and teaching endeavors.

Here is a quick update on our other Capital and infrastructure Projects:

Upgrade Electronics Laboratory Instrumentation: We are at 50% of the goal for this project and need to add and upgrade more

Cory Gloeckner Ben Grossman-Ponemon

Dr. Cory Gloeckner is an Assistant Professor of Engineering Physics at JCU and comes to us with a B.S. Chemical Engineering from the University of Cincinnati and a PhD in Biomedical Engineering from the University of Minnesota. Dr. Ben Grossman-Ponemon is also an Assistant Professor of Engineering Physics at JCU and comes to us with a B.S. in Aerospace Engineering from Worcester Polytechnic Institute and a PhD. In Mechanical Engineering from Stanford University.

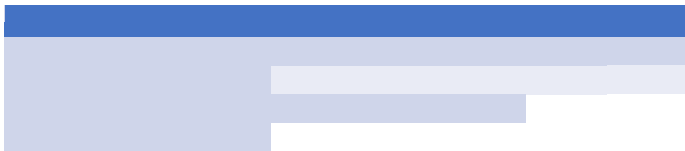
Cory and Ben are jointly working on several new course offerings and have led the way for a revised curriculum to meet the ABET Standards. These revisions include the following:

- ✓ EP1510/21– Intro to Engineering / Engineering Physics Projects (first year; fall/spring)
- ✓ EP2540 – Computation in Physics & Engineering (2nd year)
- ✓ EP3510 – Statics & Dynamics (3rd year)
- ✓ EP4511/21- Senior Engineering Design I / II (4th year; fall/spring)



Our number one goal and key deliverable of the ABET Accreditation Program is to grow enrollment. Not only for we want to add students seeking an Engineering Degree, we also want to make the JCU Physics Department a more attractive alternative to prospective students. We believe we have a very attractive offering by leveraging the Jesuit, liberal-arts education to help students learn to serve society in ethical and socially conscious ways, to be adaptable, and lead with character in their profession.

Using the 5 year average (2016-2021) as our baseline, we had a total of 25 Physics Department Majors. In 2022 we added 9 new students for a total of 34 and in 2023 we added another 15 students for a total of 49. The addition of 24 new students in the past two (2) years represents 170% of our goal of 14 students. This is a very good start. When it comes to EP student enrollment the numbers are equally as good with 8 new students vs a goal of 7 or 114% of our target.



Last year we launched a student/alum Mentoring process, in which 19 students and 9 alumni have participated over the past 2 years. This effort consisted of multiple Zoom meet-ups for professional development and career advice. Additionally, alum Nick Bjelac facilitated a site visit to Cleveland-area manufacturing facility at Swagelok in which 13 students participated. Thanks, Nick!

Recent full-time summer internships for students included NASA in Cleveland, the Southwest Research Institute in Texas, and on-campus faculty research labs. Other industry exposure has come through senior projects with Martian Sky Industries (local startup company) and National Polymer. Finally, the department as begun a formal partnership with a local space communications company, Comsat Architects, that promises to lead to internships, senior projects, and future employment of JCU grads.

