

Our Mission: To provide a Science, Technology, Engineering and Math (STEM)-focused research and education hub in Frederick that enhances access to graduate education and facilitates research partnerships that drive economic development.

https://frederickcrest.org/



## Commercial Workforce STEM Education

Improves the quality and quantity of the available local workforce



# Collaborative Research and Development

Allows industry to explore new technologies, standards and expand their knowledge base in order to support their short and long term success

#### WORKFORCE DEVELOPMEN

- Courses
- Certificates
- Seminars
- Workshops
- Interns
- Employee pipeline
- Student externs
- Employees as adjunct faculty
- Clinical Rotations

#### RESEARCH

- Matchmaking: Collaborative projects with academia, industry, USG
- Helping manage graduate student exchange with industry/USG

• Facilitating mutual agreements

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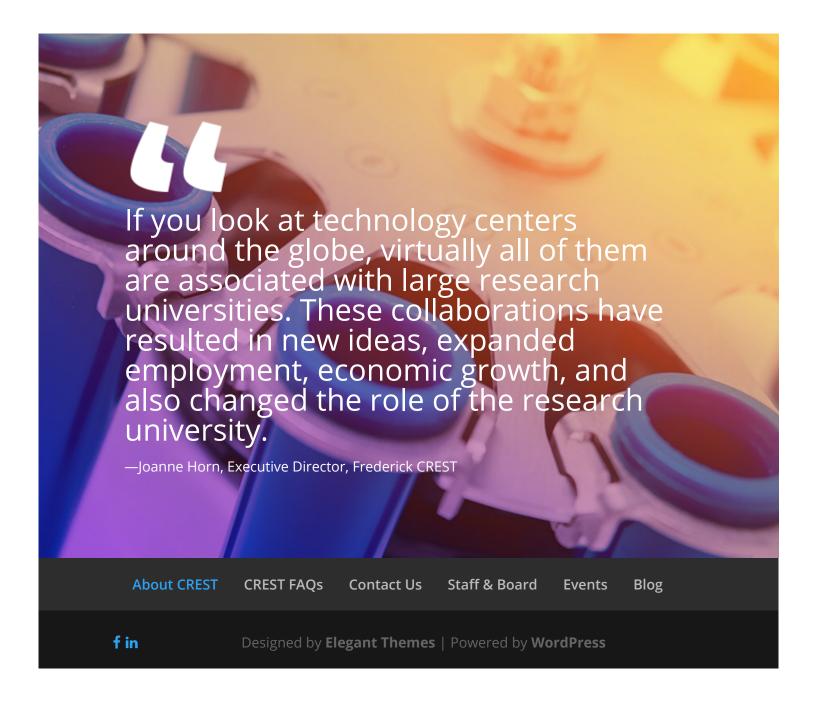


The concept for Frederick Center for Research and Education in Science and Technology (CREST) dates to a meeting of the Frederick County Chamber of Commerce's Major Employers Group (MEG) in 2007. Members of this group identified some of the major challenges to the sustainability and growth of the more than 80 different STEM-associated businesses in Frederick County. At the top of their critical list of needs was access to graduate degree and graduate certificate programs to meet the workforce and economic development needs of these regional STEM employers.

In 2013, with the help of the Frederick State Delegation, House Bill 527 was passed by the Maryland legislature, creating the Frederick Regional Higher Education Advisory Board (FRHEAB). This Board was charged with examining the constraints and opportunities of establishing a state approved Regional Higher Education Center (RHEC) in Frederick to meet the workforce needs of regional employers.

In 2014, a state-funded Frederick County Higher Education Needs Assessment was published. This assessment aided FRHEAB to identify the scope of unmet higher education needs in the area and revealed a number of academic areas in STEM concentrations that could be addressed through a RHEC.

In 2015, with the help of the Frederick State Delegation, House Bill 37 was passed by the Maryland legislature establishing a Regional Higher Education Center in Frederick known as the Frederick Center for Research and Education in Science and Technology (CREST). In FY15 and FY16, funding for CREST was almost exclusively from private contributions. In FY17, the State of Maryland began funding CREST as a state RHEC. CREST has since formally begun its mission to improve access to employer-driven STEM graduate level academic and research opportunities in the Frederick region.









#### Is CREST a school?

CREST is a Regional Higher Education Center (RHEC) in Frederick, Maryland that provides local access to graduate degree and graduate certificate programs offered by partnering universities.

#### Where do I apply?

CREST's website provides links to application pages for our partner academic institutions. All application and admissions activities should be done through the institution offering the program.

#### Where do I send my tuition payments?

CREST's website provides links to financial information pages for our partner academic institutions. All finance and tuition activities should be done through the academic institution offering the program.

#### Who will confer my degree or certificate?

Students who have successfully completed a program of study will graduate from the academic institution offering the program.

#### What are "blended" courses?

The term "blended" refers to the combination of on-site and online delivery methods for a specified course.

#### How do I apply for internships?

Students who are interested in pursuing local internships as part of a CREST-hosted academic program should go to the internship page on the CREST website to access and submit an application.

#### How do I find out about adjunct teaching opportunities at CREST?

CREST welcomes inquiries from local researchers who are interested in teaching opportunities here in the Frederick area. CV's can be sent here.

#### Who are CREST's STEM employer partners?

CREST is continually expanding its partnerships with employers in the local STEM community. Stakeholders include US government contractors, pharmaceutical and device manufactures, regulatory consulting companies, and infectious disease diagnostic developers.

#### I don't live in Frederick or in Maryland, can I still be a CREST-based student?

Although the CREST-based blended courses and laboratory opportunities are located in Frederick, CREST is available to everyone.

#### What if my question isn't on the FAQ list?

Please contact us with your questions, here.

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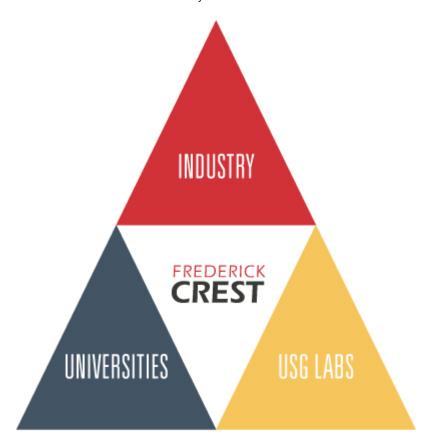






# Driving Economic Development by Partnering with Academia

CREST's primary aim is to help STEM-based industries in Frederick County forge ahead to achieve greater innovation, employment, and revenues. We are a part of making Frederick a vibrant and thriving technological hub. We offer services in conjunction with our academic partners to facilitate local learning opportunities for your workforce, create employee pipelines, and foster productive research collaborations.



## **CREST Workforce Training**

- Determine commercial training needs
- Match needs to existing programs, facilitate local access
  - Tools for streamlining and managing local participation
- Support for developing new collaborative training programs
- Connect to K-14 science education

Our training offerings are based on our partner needs. We work with our local and regional Universities (including University of Maryland and John Hopkins University), to offer technological and business/regulatory-related programs that will push our business stakeholders forward. Trainings can take multiple forms and can be customized to the requirements of our clients:

Formalized courses for University credit

- Certificate programs
- Focused workshops for a given skill, instrument, or protocol
- Seminars and symposia

## **Employee Pipelines**

CREST facilitates courses that provide graduate students a credit-bearing opportunity to participate in research at partner company sites. These externship courses allows students to bring their recently-acquired knowledge and ideas to the workplace, expose them to applied problems, and permit both the employer and the student to test-drive the experience. These externships can be performed at any stage during the course of graduate study, subject to University and department approval, and require that employers cover the stipend expense during the course of the practicum.

The following areas can be considered for externships:

- Bioengineering
- Life Science
- Computer Science
- Program Management
- Public health
- Data analysis
- Biostatistics
- Software development
- Market evaluation
- Quality control

CREST also maintains a roster of individuals (undergraduate to graduate students, and recent graduates) that are interested in performing traditional internships; these must be paid (per Maryland statutory regulations).

If your company or institution is interested in seeking interns or externs, please submit this form.

### Research Collaborations

Cooperative industry-university research models have shown to have very significant impacts on regional economies. Leveraging the cutting-edge knowledge, imagination, and reasonable research costs at partner universities has propelled industries forward, creating huge capital assets. At the same time these partnership have generated a pipeline of trained students and academics for downstream employment. The collaborations can range from focused, small scale contract research projects to wide ranging arrangements to explore new fields of knowledge, and anything in between.

Interface the needs of industry with expertise of academic and government research.

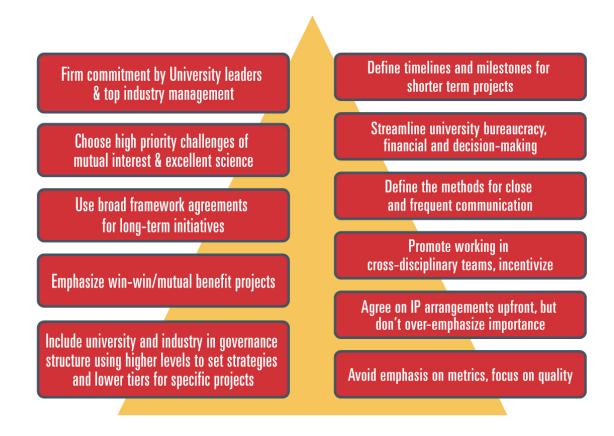
#### Potential Joint Projects:

- Student and post-doc exchange
- Industry adjuncts
- Funding
- Publication
- New synergies & innovation

## CREST can help foster collaborations:

- Matchmaking
  - Industry input on collaboration feasible
  - Tapping network of stakeholders for interest
  - Arranging workshops or symposia
- Facilitating agreements/ terms of engagement/ model contracts

Please check here for details about upcoming events and we encourage you to send us your thoughts on potential training or collaboration.



Interested in collaborations? Contact CREST today!

## Seminars and Workshops

Opportunities to meet and discuss trending topics, evolving technologies, and other issues affecting the STEM industry are an important part of a healthy STEM community. CREST can organize seminars and workshops aimed at specific industry needs like instruction on a specific instrument, technique, or software application. Please check here for details about upcoming events and we encourage you to send us your thoughts on potential seminars and workshops.

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