IEP AWARD WINNER

UNIVERSITY OF MINNESOTA
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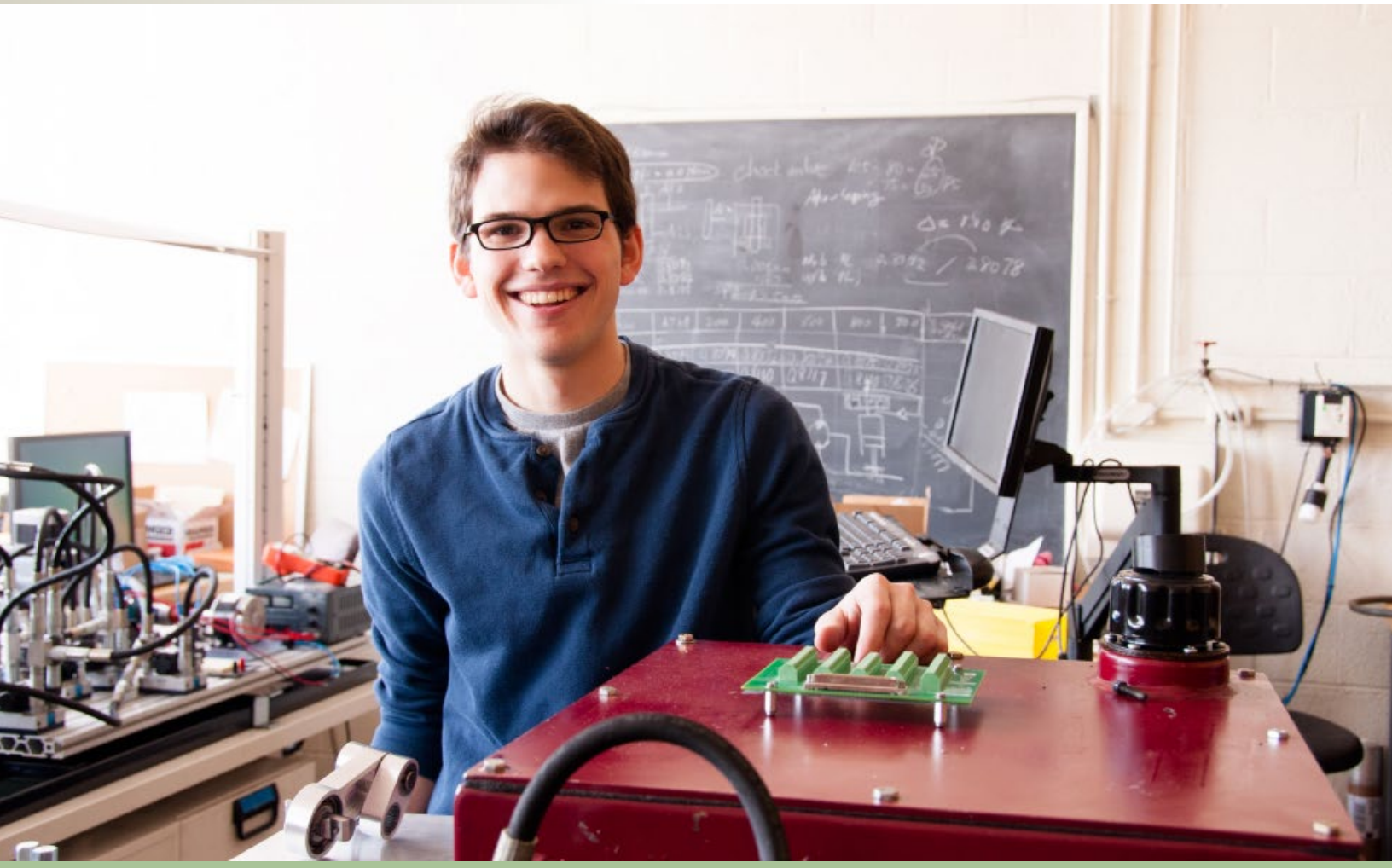


CICEP | INNOVATION AND ECONOMIC PROSPERITY UNIVERSITIES AWARDS PROGRAM

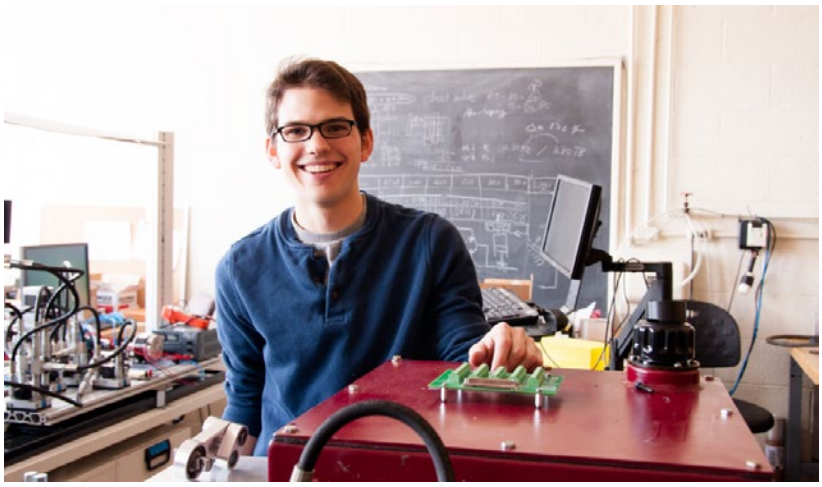
CASE STUDY 2015

IEP CATEGORY • INNOVATION

Partnerships to support talent development and create economic opportunity

OVERVIEW

To be successful in the next decade, workers will need to demonstrate foresight in navigating a dynamic landscape of organizational forms and skill requirements. To better prepare students and address future workforce needs, the University of Minnesota is advancing public-private partnerships and incorporating specialized training, experiential learning and entrepreneurship opportunities throughout the lifecycle of educational and academic experiences.



The MIN-Corps program helps science and engineering students like Shawn Wilhelm realize the market potential of their inventions.

THE PROCESS

The University works directly with many public institutions and community partners on economic development and workforce initiatives. State-based partners, such as the Minnesota Department of Employment and Economic Development, Life Science Alley, the Minnesota High Tech Association and Greater MSP are part of the University's broader innovation network that is helping to grow the economy, address workforce needs and advance new technologies in key industries, such as Minnesota's world-class medical device cluster.

One workforce initiative, Minnovator, an experiential science and technology program, brings together university, private and community partners to create opportunities for students to get hands-on business experience through internships, externships and entrepreneurial activities.

The recently established Office of University Economic Development (UED) provides a linkage between research and education resources and the state's workforce and economic development priorities. For example, UED compiles University training and graduation statistics to support business retention and expansion activities around the state and for use in industry sector strategic planning efforts.

MINNESOTA MEDICAL MANUFACTURING PARTNERSHIP

Over the past year, the University and 17 community organizations worked together to form the Minnesota Medical Manufacturing Partnership (MMMP) to develop a collaborative strategy and infrastructure to advance medical manufacturing in the state. As a result, the MMMP recently received federal designation under the Obama administration's Investing in Manufacturing Communities Partnership initiative. The designation is a stamp of approval for the current strength of Minnesota's medical technology sector and for the MMMP's ability to build on that strength.

INFORMATICS AND COMPUTATIONAL BIOLOGY PARTNERSHIP

The University's expanding informatics infrastructure is creating new opportunities for collaboration across disciplines and with industry partners to facilitate new discoveries in rapidly changing fields.

The University of Minnesota Informatics Institute fosters and accelerates data-intensive research across all areas of human inquiry. It provides data analytics services in high-throughput University core facilities for '-omics' and imaging research and brings together University researchers and Minnesota industry to accelerate the transfer of knowledge between academia and the private sector.

The Biomedical Informatics and Computational Biology (BICB) program is a joint program of the University of Minnesota Rochester and University of Minnesota Twin Cities campuses. Established in 2007, the program responds to the increased importance of bioinformatics and computational biology in the life, agricultural and health sciences and the increased need to train scientists with quantitative skills.

BICB Program Outcomes	
Faculty (University, Non-profit, Industry)	78
Enrolled Students (total)	75
Doctorate	30
Master's	45
Students Working in Industry	40%
Doctorate Degrees Awarded	5
Master's Degrees Awarded	18

As of Fall 2014

The BICB program, which offers both master's and doctorate degrees, is designed to build on the capacity of the medical expertise and industries in the Rochester area and Twin Cities campus to meet the educational needs of these growing scientific fields in Minnesota. BICB students, many of whom already work in industry, are co-advised by University faculty and industry researchers from partner companies such as the Mayo Clinic, IBM and Medtronic.

ENTREPRENEURSHIP AND INDUSTRY PARTNERSHIPS

The University of Minnesota is involved in several initiatives focused on developing an entrepreneurial workforce:

1. MIN-Corps

Minnesota Innovation Corps (MIN-Corps) is a program aimed at helping science and engineering students and researchers identify the commercial potential of their discoveries and expand their skill sets out of the laboratory to translate discoveries into the commercial world.

National Science Foundation (NSF) funding provides University teams with micro-grants to fund initial prototyping and customer research. Funding is provided as part of a 14-week curriculum in which students and faculty are paired with industry mentors to test their assumptions and search for a sustainable business model. Additional resources and events support the ongoing transitioning of research into commercial products.

Over the past four years, more than 140 students and faculty have completed lean startup training in MIN-Corps workshops and related courses. Part of the national NSF Innovation-Corps program, training consists of applied entrepreneurship courses for students at both undergraduate and graduate levels, in which micro seed grants and mentoring support the testing of new venture concepts.

MIN-Corps Outcomes	
Program Participants (Students, Faculty)	140
Entrepreneurs/Executive Mentors	30
Student-owned Startups	15

2. MN-REACH

In March 2015, the University of Minnesota was selected by the National Institutes of Health as one of three Research Evaluation and Commercialization Hub (REACH) sites. Supported by a $3 million NIH grant with another $3 million in matching University funds (sufficient to fund 10-20 research projects per year), the MN-REACH program provides coaching, training, commercial expertise and resources needed for the development and commercialization of diagnostics, therapeutics, preventive medicine and medical devices.

Key components of the program include:

- Workshops and entrepreneurial education for innovators to accelerate commercialization activities
- Infrastructure for identifying the most promising technologies
- Funding for feasibility studies, prototype development and proof-of-concept studies
- Coordinated access to expertise in areas required for early stage technology development
- Industry partnering

MN-REACH builds upon several existing, nationally-recognized programs at the University including MN-IP, Discovery Capital and MIN-Corps. MN-REACH also builds upon Minnesota's long history of success in medical innovation, as the state is home to the top 17 publicly traded medical device companies in the U.S. At the University, medical innovations are among the most prominent inventions of the U's commercialization portfolio.

3. MN-Cup

MN-Cup is a program of the University's Holmes Center for Entrepreneurship that supports emerging entrepreneurs from across the state through events, educational programming and an annual new venture competition that provides tools, resources and support to launch and accelerate the development of new ventures.

Over the past 11 years, more than 5,000 University of Minnesota students, alumni, faculty or staff have participated in MN Cup and have gone on to raise an estimated $90 million of capital.

During the 2015 competition, more than 300 members of the business community supported MN Cup as mentors, judges or sponsors.

Across its statewide campuses, the University of Minnesota is tapping into Minnesota's regional and economic strengths to develop innovative training programs aimed at helping faculty and students to advance new discoveries, create economic opportunity and bolster key industry sectors.