

Reh Center for Entrepreneurship at Clarkson University

Nomination for the

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in the category of

National Model Undergraduate Entrepreneurship Program

Nominated Center: The Reh Center for Entrepreneurship at Clarkson University

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Inspiring a Campus Wide Entrepreneurial Mindset

Reh Center for Entrepreneurship at Clarkson University

Clarkson University was founded in 1896 as a memorial to Thomas S. Clarkson, successful entrepreneur and Northern New York businessman who was distinguished by a deep and abiding concern for humanity. Today, Clarkson is a nationally ranked research university offering more than 50 comprehensive programs in business, engineering, science, liberal arts, health sciences, and environmental studies. Clarkson has developed an international reputation in the fields of Advanced Materials Science, Biotechnology, Environment & Energy, Entrepreneurship, and Global Supply Chain Management.

For the past three years, the Princeton Review ranked the Reh Center in the top 15 colleges for Undergraduate Entrepreneurship. Additionally, Forbes lists the University as one of “America’s Most Entrepreneurial Universities”, Entrepreneur Magazine highlights Clarkson as one of five schools that “Cater to Undergrads Who Want to be Tech Innovators” (**Exhibit 1**), and both the Brookings Institute and the Kauffman Foundation (**Exhibit 2**) have lauded Clarkson’s contributions to entrepreneurship and innovation.

Creating a campus wide entrepreneurial mindset requires support from key University stakeholders; Clarkson University’s President, Anthony G. Collins, is fully engaged both in facilitating this mission and in the transferability of our model to drive economic development. President Collins has served New York State Governor Andrew Cuomo as the co-chair for the North Country Regional Economic Development Council for the past three years. In this role, he has been instrumental in redefining the relationships among state government, business, and higher education in an effort to stimulate economic development through creating and retaining businesses. Further, the Reh Center works closely with university trustees, the deans of Clarkson’s three schools (Business, Arts & Sciences, and Engineering), a network of alumni mentors, and a strong Reh Center Advisory Council to drive interdisciplinary initiatives with multiple stakeholder groups. These partnerships have created buy-in that has been instrumental in the dissemination of both the Reh Center’s mission and a campus entrepreneurial mindset.

Clarkson produces remarkably effective engineers, scientists, health professionals, business people, and creative leaders who easily engage “What’s next?”. We have created an exceptionally demanding, boundary-spanning experience in an entrepreneurial community known for core values and technology intensive resources (**Exhibit 3**).

THE MISSION OF THE REH CENTER FOR ENTREPRENEURSHIP

The mission of the Reh Center is to develop high potential entrepreneurial thinkers through immersion in experiential opportunities that create a culture of ingenuity and enhance the educational experience. The primary objective is to strengthen entrepreneurs, build entrepreneurial capacity, and drive an entrepreneurial mindset across campus. The Center is housed in the School of Business and is staffed by full time director, Erin Draper; full time program coordinator, Ashley Sweeney; a part-time administrative assistant; twenty-four student interns; and approximately 30% of the School of Business faculty teach in the Innovation and Entrepreneurship (I&E) major.

INNOVATIVE AND COMPREHENSIVE APPROACH

Unique Integrated Curriculum

I&E plays a critical role in a Clarkson education and as such, it is one of only five majors in the School of Business (**Exhibit 4**). Further, the core School of Business curriculum is imbued with innovation and entrepreneurship content starting in the first year and continuing throughout the four-year undergraduate experience. Our I&E students are required to take twenty-one credit hours in I&E that provide a solid core in both new products and new ventures and are given the opportunity to specialize through an additional nine credit hours of professional innovation and entrepreneurship electives based on individual areas of interest (**Exhibit 5**). Content is delivered by engaged faculty, of which 90% are academics publishing in top international journals while 10% are practitioners and entrepreneurs.

Hands-on entrepreneurship experience starts the first semester students arrive on campus. In a two-semester sequence, all first year business students are challenged to develop a new product or service, pitch to investors for funding from the First Flight Fund, and launch a business. These businesses are guided by faculty and receive

mentorship from upper class students and a network of young alumni. This experiential approach to entrepreneurship gives first year students an understanding of core business functions and concepts in real-life contexts, provides early exposure to working as members of multi-functional teams, supports students in seeking intellectual property protection for innovations, and inspires students to launch their own businesses. The experience serves as a foundation, rather than a capstone, upon which to build entrepreneurial capacity (**Exhibit 6**).

Clarkson's holistic curriculum weaves entrepreneurship through a number of core classes (**Exhibit 7**). In the I&E senior capstone course, Commercializing Innovation, products designed and tested by our nationally recognized engineering students are reviewed by I&E students for commercialization potential; these students conduct market research, suggest improvements, and recommend commercialization options. The Shipley and Reh Centers provide follow up support and 24 provisional patents have been filed from this process over the past two years (**Exhibit 8**).

Further, recognizing the importance of integrating entrepreneurship into their curriculum, the Honors program and the Adirondack Semester have contracted the Reh Center director to team-teach courses. These students have been exposed to tech startups and regional entrepreneurs and are developing skills in opportunity recognition and project development using a design thinking approach.

Unique Experiential Portfolio

1. On Campus Competitions

Young Entrepreneurs and Innovators (Approximate Total Available Annually: \$850,600)

In the Reh Center's Young Entrepreneurs and Innovators Business Plan Competition, prospective students are given the opportunity to attend Clarkson University without payment of tuition for their undergraduate careers through a combination of merit-based financial aid and a purchase by Clarkson of 10% equity in their firm. This is "Division 1 Entrepreneurship" – students no longer have to rely on athletic ability to finance their education. These students can lean on faculty for advice and share real-world lessons in classroom discussions (**Exhibit 9**).

North Country Regional Business Plan Competition (\$20,000 available)

The New York Business Plan Competition (NYBPC) is now one of the largest business plan competitions in the country. Clarkson University has partnered with SUNY Plattsburgh to host the North Country regional of NYBPC. In each of six categories, first and second place teams in regionals advance to the state competition in Albany where over \$500,000 is awarded. In 2014, ten North Country teams advanced to the state competition, eight of which originated at Clarkson – of the eight teams, seven won prizes and awards at the state level (**Exhibit 10**).

Incoming Student Design Challenge (\$2,250 available)

The Reh Center launched a design challenge to all incoming students this summer (2014) before their arrival on campus. Using social media, students were challenged to identify opportunities in their daily lives, create cross-disciplinary teams, and begin working on solutions – all virtually. Eight teams of students representing thirteen majors are working on problems that range from alternative energy to gender stereotypes. Clarkson MBA students provide mentorship as they work through the design, development, and commercialization process.

First Flight Fund for Entrepreneurship and Business Innovation Class (\$37,500 awarded)

As mentioned, every first year student in the School of Business enrolls in a two-semester sequence in which they develop a business concept, formulate a business plan, pitch to investors, and operate their company. In November 2014, 11 teams pitched and were awarded \$25,000 in total. This program has been successful for over 15 years, with funding provided by multiyear alumni gifts to the First Flight fund. In addition to funding, teams are also matched with a "Young Alumni Mentor" to help support their company's launch. In July 2014 we received word that one of these first year student companies, Innovative Delivery Systems, had been acquired.

Sprout Foundation Fund (Total Available: \$250,000)

This program is available to Clarkson University undergraduate and graduate students. The fund awarded a \$250,000 loan to student start-up company Blue Sphere Industries to scale-up their controlled Environment High-Rise Farm (CEHRF) units in 2012 and future distributions will occur on repayment of this loan.

“Speed Sell” Sales Competition (\$225 awarded)

In September 2014 the Reh Center partnered with the University Career Center and the deans of each of Clarkson’s three schools to host the first annual Speed Sell Competition. Twenty-eight participants gave their two-minute personal pitch to ten judges in this fast paced speed-dating style event. Twenty-five company recruiters served as judges and also provided tips on best practices for strengthening a pitch (**Exhibit 11**).

2. Intercollegiate Competitions

In addition to the competitions hosted by the Reh Center, our students have competed and been successful in several additional intercollegiate competitions throughout the last academic year including:

- NY State Competition – seven Clarkson teams won prizes
- SUNY Plattsburgh Enterprise Olympics – 1st in the "Speak-Off" competition (\$750) and 1st overall (\$300)
- Sigma Nu Tau Entrepreneurship Honor Society – National Student Entrepreneur of the Year (**Exhibit 12**).

3. Business Incubation / Peyton Hall Incubator

The 16,000 square feet Peyton Hall incubator opened on our downtown campus in July 2011. It is currently operating at approximately 90% capacity and includes tenants that range from professional service providers to high tech startups. Twenty-seven startups with faculty, student, or community member founders reside in the incubator; the Reh Center and Clarkson’s Shipley Center for Innovation provide support.

4. Outreach

Regional Business Owners

My Small Business 101 provides an innovative format for the delivery of concise business concept training that relates to common, critical elements of business operations. Over 850 regional small business owners have taken this course to date and it is offered at least annually at no charge (**Exhibit 13**).

High School Students

The Reh Center conducts 5-7 activities throughout the year for local and regional high school and middle school students to provide exposure to entrepreneurial concepts in an interactive and creative environment.

5. Mentoring

The Reh Center staff provides guidance and mentoring as well as networking and connections to new enterprises; over fifty mentors consisting of alumni, faculty, and staff were utilized during the 2013-2014 academic year. Faculty in various disciplines including marketing, finance, law, accounting, and engineering serve as mentors that the Reh Center can plug teams into as needed while the Shipley Center provides guidance and equipment for rapid prototyping and commercialization support. Further, in the fall of 2013, a young alumni (< 10 years out) mentor group was formed to assist student startup businesses.

6. Idea Jam

Idea Jam is a monthly student led program that uses speakers and design thinking tools that facilitate cross-disciplinary team formation; approximately 30 students/month from various majors take part in this program.

7. Global Entrepreneurship Week (GEW)

The Reh Center partnered with GEW to drive cross-campus engagement. In 2014, 560 people signed in at our 17 campus events, which included speakers, workshops, pitches, a poster competition, and Entrepreneur in Residence hours. We conservatively estimate that at least 1/3 of our campus community was engaged during GEW2014 and attendees included faculty, staff, students, parents, alumni, community members, small business owners, and prospective students. We were also represented at the UN Women’s Entrepreneurship Day where our student business, Entrepreneur Coffee, was the official coffee served and at the National Sales Competition at the Russ Berrie Institute where our student finished in the top 10. (**Exhibit 14**). Students stated that networking with successful entrepreneurs such as Marty Roesch ’92 (founder of Sourcefire, acquired in 2013 by Cisco for \$2.7billion), Peter Devlin ’80 (CEO of Fish and Richardson, one of the largest IP firms in the country), and others, provided inspiration and knowledge for their entrepreneurial pursuits. GEW created conversation and awareness across campus that we can leverage to increase startup activity and program participation.

8. Intrapreneurship

All programs of study at Clarkson encourage teamwork, risk taking, and interdisciplinary problem solving – skills that allow our graduates to make significant contributions to their employers. Clarkson ranks among the top 50 on PayScale 2013 list of college education value rankings for return on investment and #1 in the nation for grads with the most internship experience by US News and World Report 2013. Alumni rise to these positions in part because of the entrepreneurial mindset that exists in the Clarkson DNA.

9. Reh Center Internships and On Campus Startups

Internships provided by the Reh Center provide students in any major the opportunity to work with local entrepreneurs in need of assistance. Their projects include developing marketing plans, teaching seminars to local business owners, using social media, and marketing the Reh Center programs to prospective students.

Entrepreneur Coffee

Entrepreneur Coffee, a micro-roasted coffee brand, was launched by students to support regional businesses. Products are sourced locally and 100% of the profits generated are invested back into Reh Center programs.

MoJoe - Student Run Cafe

MoJoe has had a big impact on our campus in its brief history. Since opening in July 2013, the business has been a living classroom, a meeting place, a sponsor for the student business plan competition, and has provided funding for 17 students who collectively earned \$26,800 in FY14. As a laboratory MoJoe has provided projects for school of business courses including accounting, project management, and human resource management.

10. Social Entrepreneurship / Microfinance@Clarkson

In early 2013 a \$150,000 gift was secured to develop a self-sustaining micro-finance fund. The program sent students to Uganda in May 2014 to administer micro-loans and educate entrepreneurs through a partnership with Mbarara University. The funding also sent three students and a faculty member to the Kiva Summit to start a social entrepreneurship club. Finally, we are working with an NGO, Viviendas Leon, for students to mentor startups in Latin America and are creating social entrepreneurship track in the curriculum.

11. Sigma Nu Tau Entrepreneurship Honor Society

Clarkson University's chapter of Sigma Nu Tau (SNT) national entrepreneurship honor society was chartered in November 2011. Founded in 2009, the mission of SNT is to recognize students, faculty, and entrepreneurs who excel in the study of entrepreneurship and/or who are models of principled entrepreneurship. In each of the last two years (2013, 2014), Clarkson entrepreneurs have been the national SNT Entrepreneurs of the Year.

Support of Research

The Reh Center, with \$50,000 in funding from the School of Business, is supporting five faculty research projects on entrepreneurial topics (**Exhibit 15**). An endowed faculty speaker series launched in fall 2014 and has brought leading scholars and practitioners to campus to inspire collaborative research opportunities. Further, Clarkson's unique research performance evaluation process for tenured faculty encourages cross-disciplinary publication by weighing publications both in and out of the faculty's designated field the same. Given the cross-disciplinary nature of I&E, this incentivizes faculty to reach outside of the School of Business to collaborate with researchers in engineering, sciences, and liberal arts. This connection has spurred exciting projects such as our Sustainable Solutions for the Developing World minor (**Exhibit 16**).

SUSTAINABILITY / SOURCES OF FUNDING

Reh Center programming is funded through a combination of endowment support, program revenue, and corporate, foundation, and individual donors while staffing is provisioned in the University operating budget. We have also endowed two entrepreneurship faculty for the School of Business, the Richard '55 and Joy Dorf Chair in Innovation and the Reh Family Professor of Entrepreneurial Leadership, to be hired for Fall 2015. A third endowed position, the Neil '64 and Karen Bonke professorship in Engineering Management is held by a former Master Inventor of IBM who facilitates the student invention course that feeds the Commercializing Innovation class. These positions are validation of the important work occurring in entrepreneurship and innovation at Clarkson.

TRANSFERABILITY

Based on the strength of our entrepreneurial and commercialization ecosystem, Clarkson University was chosen by New York State to host one of five “Innovation Hot Spots,” serving seven upstate NY counties. The University has developed a scalable model with a track record of success through various centers including the Reh Center for Entrepreneurship, the Center for Advanced Materials Processing, and the Shipley Center for Innovation. By centralizing resources/services at Clarkson and de-centralizing idea generation/capture across the region, the North Country will harness existing intellectual capital to create businesses we need to drive economic development.

Clarkson’s success in the entrepreneurship space can be deconstructed through the lens of change management. Just five years ago, most of the programs discussed did not exist – however by creating a need, exciting students and administration, generating small wins, tracking success, and leveraging outcomes to drive philanthropic and administrative support we have created a cultural shift that is palpable on our campus and that is replicable on other campuses.

STUDENT BENEFITS

One in five Clarkson alumni is a CEO, senior executive or owner of a company. Our integrated, hands-on and innovative approach to education provides a supportive and successful community of next-generation leaders with an entrepreneurial mindset. Clarksonians from around the globe design new products and start new businesses that make the world a healthier, wealthier, and more humane place and entrepreneurship is a driving force.

Practical experience, grounded in strong research and theory, provides record numbers of Clarkson freshmen and sophomores with internship opportunities that were historically reserved for juniors and seniors. Employer feedback indicates our students exhibit greater maturity, confidence and problem solving skills than their counterparts from other programs (**Exhibit 13**).

OUTCOMES

University

Overall, the Reh Center has raised the profile of both the University and the School of Business through programs that enhance the student experience. Our programs have garnered media attention and earned the university a #14 ranking in Entrepreneurship by the Princeton Review and Entrepreneur Magazine.

Students

The Reh Center has implemented a longitudinal tool that measures student self-efficacy, mastery of concepts, acumen, networks, startup activity, and career opportunities. This tool provides data about the effect of experiential opportunities on student development. Initial data show that students in Reh Center programs earn 0.6 points higher GPAs, are hired for internships and co-ops on average one year sooner than others in the School of Business, and are two and a half times more likely to take advantage of additional experiential programs such as semester abroad. Our programs have produced a learning environment that values creativity and creates opportunities for students to develop an entrepreneurial mindset that employers consistently value. (**Exhibit 13**).

Regional Small Business Owners

The *My Small Business 101* series has achieved an 85% two-and five-year business survival rate, compared with a 45% survival rate nationally. We have measured and shown significant impact on revenue, profit, and confidence of these entrepreneurs. Further, in a region with high unemployment, employment in the alumni group was stable.

CONCLUSION

It is important to note that 100% of students in Clarkson’s School of Business have been involved in at least one of the programs mentioned in the above nomination and more than 35% of the student body (all majors) participates. The Reh Center for Entrepreneurship has a history of success in promoting economic growth through the integration of students in the education and support of regional entrepreneurs and student start-ups. Now, with the full support of both administration and respected faculty we are having a deeper impact on faculty, staff, students, and community through our support of research, curriculum, startup generation, and intrapreneurial capacity building across all majors at the University.