



May 23, 2022

MEDICAL VALUATION LABORATORY MEMORANDUM OF AGREEMENT

The Lab is a leader in educating professionals to evaluate and estimate the investment potential of real-world health care innovations, accelerating their careers and preparing them for global leadership roles.

Overview

In 2008, the Medical Industry Leadership Institute (MILI) created the Medical Valuation Laboratory, which has grown to be MILI's signature course from the perspectives of business partners, inventors, and students. The Medical Valuation Lab is an experiential learning course which teaches students to conduct rapid market assessments for new medical innovations. Students in the course produce over 30 analyses per year, helping assess lifesaving ideas and streamlining the time-to-market for critical new products. The Lab has a wide audience, ranging from students in eight different colleges at the University of Minnesota who want to gain hands-on, real-world experience, to clients and inventors who want a top-to-bottom analysis of their medical technology and its prospects in the market, to recruiters looking for future employees.

The goals of the Lab are to help inventors accelerate the innovation pipeline, prepare students for leadership roles in the medical industry, and drive economic development. The value of the Lab to students, inventors, and recruiters is immense; the benefits to the medical industry and society at large are even greater. Every five weeks an inventor gets a recommendation, supported by facts and figures, which helps them make an informed decision to go forward with that project or move on to something new. It is very possible that a new lifesaving idea got its beginning in the Valuation Lab.

History

In 2009, Professor Stephen Parente, PhD Minnesota Insurance Industry Chair of Health Finance, Associate Dean, Carlson Global Institute, and Founding Director, Medical Valuation Laboratory, Carlson School of Management, gained the cooperation of eight collegiate deans at the University of Minnesota, through a memorandum of agreement. This agreement created the Lab as a capstone experiential learning course to be offered to graduate students from programs and colleges across the University of Minnesota. Since 2009, over 30-degree programs have been represented in the Lab with non-MBA students making up 13% of total enrollment. Since its start, over 400 projects have been completed for local and global companies, individual entrepreneurs as well as inventors from the University of Minnesota.





From the beginning, Professor Parente saw the importance of the Lab being an interdisciplinary offering for students, clients and recruiters.

Students working together on cross-functional teams, with classmates from different programs and backgrounds help each other fill gaps in experience. Don't know much about intellectual property? No problem, a law student can give you a brief lesson. Wondering what the pancreas does? Ask your medical student colleague. Will trying to build this invention defy the laws of physics? The engineer in the class can tell you. Not sure how to write up your report? Technical writers from the College of Liberal Arts can assist. Never completed a market assessment? Ask your MBA teammate. Each team member not only has important skills and knowledge to share—they are able to learn just as much from their classmates.

Clients and Inventors: Innovations that have the benefit of a full and thorough evaluation can often be pushed into the market more quickly. The rapid turnaround of the Lab where students apply the “business” aspect to these inventions, speeds up the innovation pipeline. By doing so, potentially disruptive advancements can get to market more quickly and have positive impacts on patient care. The types of projects seen are varied, from cardiac to orthopedics and gastrointestinal to oncology illustrating the potential to change many markets and standards of practice. Students provide inventors with a pathway on how to turn their idea into a marketable product.

Recruiters: Alumni of the Valuation Lab are highly sought after as they enter the workforce. They receive hands-on, real-world training that is unique to the Lab, allowing them to develop critical thinking skills. These students can hit the ground running as they enter positions at leading medical industry firms. Because of this course, students can impress potential employers with knowledge gained from having worked with different innovations and a deep understanding of what is involved in taking a product to market. It also helps them with their professional networks - they not only meet with the inventor but also work with physicians, engineers, and others in the healthcare space as they conduct their research. Students gain a real edge when recruiters know that they have these skills and networks, in addition to having completed complex Lab projects. The experience in the Lab not only helps students land jobs but gives them smooth transitions once they start their careers.

PROCESS & PROCEDURES

Course Offering & Timing

The Medical Valuation Lab is currently offered in two different formats:

1. A 2-credit one semester graduate-level elective, offered during fall, spring and summer terms on the Twin Cities campus
2. A 4-credit graduate-level elective, offered in condensed format in off-campus global and national locations.





Enrollment & Tuition

This course is open to students currently enrolled in a graduate program at the University of Minnesota. Undergraduates are allowed to register only with instructor approval after a brief interview. Students will be allowed to enroll in the Lab for up to three semesters and there are no course prerequisites. Students will be assigned to an interdisciplinary project team and will, in five weeks, complete evaluations of promising medical innovations.

Faculty & Instruction

The Lab is housed in the Carlson School of Management in a separate workspace like other Carlson Enterprises with one full-time faculty and three to six Carlson adjunct faculty instructing the various semesters and locations. The staffing and coordination of the Lab will be the direct responsibility of Carlson's Medical Industry Leadership Institute (MILI) and supervised by MILI's Managing Director. Operational and logistical components of the Lab will be provided by the MILI's staff, faculty, and student teaching assistant. Faculty from other collegiate units can take part as advisors at the discretion of the Lab's leadership as well as the leadership of their collegiate unit.

Lab Process

The course starts out with a mandatory full day bootcamp where students learn about the required processes needed for each project (see Figure 1), how to conduct pertinent research, and learn perspectives from the best and brightest experts in regulatory, legal, and medical technology fields. Students are assigned the first of three projects at the end of the day and then hit the ground running. For the next three weeks, teams and instructors spend class time discussing assumptions, validations, and verifications to form final recommendations. In week four, students conduct a mock presentation that is critiqued by instructors and classmates, and in week five they give final presentation to inventors. That same evening, the students receive their next project and start the process over again.

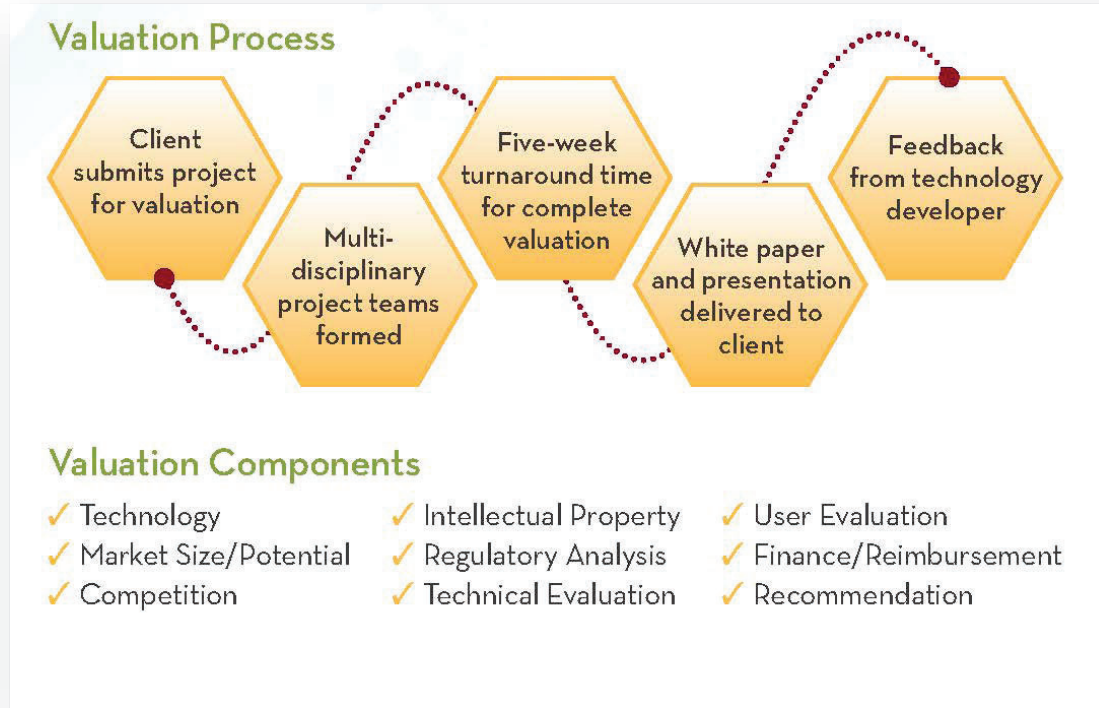


Figure 1

Clients Project Submission & Deliverables

To submit a project for consideration, prospective clients must complete an intake form describing their innovation. The University has also developed a non-disclosure agreement for the Lab. This agreement must be signed by the client as well as the University before work on the project will begin.

After the students deliver their presentation to the client, they will share the presentation as well as a white paper which will include more details on their findings. Both the presentation and paper will include findings as listed in Figure 1

The Lab has helped organizations and individual inventors throughout Minnesota, across the nation, and around the globe. Students have seen projects from:

- Hospitals and clinics
- Medical device manufacturers
- Fortune 500 companies
- Healthcare startups





- Nonprofit organizations

Engagement & Participation

Other participating colleges can engage in the following activities for Lab participation.

1. Supply a separate course number for the collegiate unit or have a special studies course option available, if necessary.
2. Provide outreach opportunities to inventors for college-specific technical aide or market development.
3. Market the Lab both to students interested in enrolling as well as to potential entrepreneurs interested in submitting projects.
4. Provide funding to make an impact for students, inventors, and the medical industry community (see Figure 2)

IMPACT

SPONSOR

Allow students to experience the Lab in different locations and learn about the local business eco-systems by providing much needed scholarships.

ENRICH

Create opportunities for lifelong learning and community by offering programs for current students and Lab community.

ENHANCE

Increase communications and involvement with inventors by developing tracking and customer relationship management systems and tools.

EDUCATE

Develop educational opportunities and resources for inventors to help them bring innovations to market faster and more successfully.

EXPAND

Develop the Lab in other locations both globally and nationally. Partnerships will help the local innovators as well as the students' knowledge of different businesses and markets.

PROVIDE

Secure financial stability to allow for stable professional staffing and resources.

Figure 2



By signing this memorandum of agreement, the following collegiate units agree to support the provision of the Medical Valuation Lab to advance the University's goal of increased interdisciplinary discovery and opportunity with direct benefit to the community.

Andrew Alleyne

/ October 13, 2022

Andrew G. Alleyne, Dean, College of Science & Engineering

Date

Timothy Beebe

/ 10/14/2022

Timothy Beebe, Interim Dean, School of Public Health

Date

John Coleman

/ 10/20/2022

John Coleman, Dean, College of Liberal Arts

Date

Connie Delaney

/ 10/19/2022

Connie Delaney, Dean, School of Nursing

Date

Garry W. Jenkins

/ 10/25/2022

Garry W. Jenkins, Dean, Law School

Date

Carol Strohecker

/ 2022.12.19

Carol Strohecker, Dean, College of Design

Date



TOLAR

Dec. 19, 2022

Jakub Tolar, Dean, Medical School

Date

Lynda A Welage

Oct. 19, 2022

Lynda Welage, Dean, College of Pharmacy

Date

Sri Zaheer

12/19/2022

Sri Zaheer, Dean, Carlson School of Management

Date

