# Master of Science in Clinical Informatics Management (MCiM) Virtual Information Session Transcript – August 25, 2020

**Kevin Schulman:** Thanks everyone for joining us today. My name is Kevin Schulman, I'm the director of Stanford's newest master's degree the Master's of Science in Clinical informatics Management and this is our first virtual information session, we are very excited to be chatting with you today. I'm joined today by Zoe Richardson, who is our program manager for MCiM – Zoe.

**Zoe Richardson:** Hello, everyone. Thank you so much for joining us this evening.

**Kevin Schulman:** By way of background, I am a faculty member here at Stanford. I've been here for two years, I'm an internist, health services researcher, and health economist. I have appointments in the Department of Medicine and at the Graduate School of Business. Before coming to Stanford I was a member of the faculty at the medical school and the business school at Duke (University) and then subsequently at the medical school at Duke and business school at Harvard. So, I've had a long career of teaching at the intersection of business and health information technology.

The Masters of Science and Clinical informatics Management is a new degree program here at Stanford. I'll explain a little bit more about the program and what the opportunity we see is for this program at Stanford. In terms of our agenda for this info session, I will introduce myself a little bit as well as Zoe. Zoe had been fellowship director of our Clinical Excellence Research Center design fellowship and is now, as I said, Program Manager for this program. (I should also say that we are recording this webinar tonight and the webinar will be available on the MCiM website.)

In terms of an agenda, we’ll describe the program about why we're excited about this new degree program here at Stanford. I will discuss a little bit more into the skills that students will gain from the program, how and who will benefit from the program, and then we will have some information Zoe will go over regarding the application process and admissions process. We've been fortunate to have a bunch of questions submitted in advance that we will go through very quickly. At any given time, Zoe's monitoring the chat while I'm talking, so if you have questions, please use the chat function and we'll be happy to answer them.

The idea of health information technology is not new, and the opportunity to use information technology and has been around for a long time. Here's Barack Obama, going back in history in 2009 he signed something called the HITECH act that provided financial incentives for doctors and hospitals to adopt information technology and healthcare. At the time he said Health Information Technology connects doctors and patients with more complete and accurate health records. Tools like electronic health records and electronic prescriptions will help patients and providers make safer, smarter decisions about healthcare. Better technology can also cut costs for providers, by reducing paperwork and duplicative tasks. From this really broad vision about health information technology, the federal government has invested $38 billion and health information technology over the last decade. Despite this very clear vision and how technology would improve the practice of medicine and improve the experience for patients, there's actually very little evidence that we've been able to accomplish a lot of these, so functionally, yes, we do have records. Yes, we do have electronic prescriptions, but we don't have these economic benefits. And the question is, why? Why is it that with such a massive investment, we don't have a different health care system? And that's where MCiM comes in.

So the idea of improving quality and reducing costs and healthcare is a core goal. It isn't just adopting electronic health records to get us over the finish line. Our vision for MCiM as a targeted intensive approach to knowledge and skills, not wildly taught in terms of how to shape organizations and how to take advantage of this evolving digital landscape. Obviously here at Stanford were surrounded by riches on the campus in terms of the engineering school the business school, the design school but also their product across the Bay Area innovation community. We're all struggling with this question about why? Why can't we use digital tools to really evolve the healthcare system and managed fashion. On top of that, you know, coming to Stanford from the East Coast, you're really struck by this sense of optimism and on the campus and in the community. We're here to tackle big problems. The cost of health care, quality health care, and accessibility of healthcare - the so called triple aims, is a big problem that really merits a Stanford size solution. That's why we're so excited about this program.

In terms of the key features, we wanted to build a program for working professionals. Now, this is not just clinicians and I'll talk a little bit more about that. We want to combine class projects with weekend classes. This will be a primarily in person program, and providing where we are in the year, classes will start June of 2021. Hopefully we'll have a different environment by that time and be able to conduct our classes on campus, but we'll be here every other weekend. The idea is to uniquely blend Stanford's expertise and medicine business and technology in the classroom.

We're going to cross-campus build an interdisciplinary network of faculty and affiliated centers and students. (I'll tell you more about that.) We’ll try and address this idea of technology business and healthcare from a management perspective to provide students with the tools they need to apply technology to really accomplish the triple aim goals of cost, quality and access in healthcare. I think at the end of this, we're really excited and hope that we will create a cadre of leaders prepared to address the urgent healthcare issues that we're trying to face, and the technology challenges that surround all of us. This is quite an ambitious set of goals, but it's quite an ambitious program.

In terms of the curriculum: This is a curriculum that has evolved over time. I started it at Duke about a decade ago and it's evolved over time, and now for MCiM we put this curriculum in a Stanford context. What we are trying to do is marry the features: How can we be effective within an organizational structure within the healthcare system within a technology company? …within Health insurance company? …or healthcare delivery organization? How can we be effective as leaders, and what are the tools that we need to help us as leaders and managers to succeed? Those tools all draw from business disciplines. One of the cores of MCiM on the business side is about half of the core of an MBA program. The other set of tools are around technology and how we think about technology and that includes using design thinking. Design as a way of deploying technology has a lot to do with the technology courses that all describe and applications of technology specific solutions and health care. Finally, we're going to bring this all together with a broad bioethics wrapper. If you think about the intersection of business technology and healthcare, we run into issues of data privacy, we run into things like algorithm development and biases. I'm doing a lot of work right now and computer vision. How do we think about applications of computer vision in healthcare? So that's the overview of the curriculum. The next two slides I'll lay out the different classes and describe them briefly.

We start with the core of businesses, *Accounting for Managers and Entrepreneurs*. This covers both topics of financial accounting and managerial accounting. Financial accounting is “how do we do reporting with things like income statements in cash flow statements and balance sheets”. Managerial accounting is “how do we understand things like cost accounting and the use of accounting tools to help us understand unit economics”. Accounting is kind of a core class with a core set of principles I was always scared of accounting as an undergrad, but actually it was one of my favorite courses in in business school.

Stanford is really famous for its D school (Design school) and we're going to bring that into our program through a unique bio design course. In quarter one we will approach design thinking as it is applied to health information technology solutions. (We have a really fabulous faculty member that we've identified for that program.) Leading and managing healthcare organizations: how do we think about management, management skills, leadership skills, as well as what's special about healthcare and working in a multi-disciplinary environment, high pressure environment, and challenging environment. This will be our core management class.

Finally, as I said, we have a bioethics seminar that's going to run the full year. David Magnus from “Stanford Center for Biomedical Ethics” has agreed to head up that class. It is going to be a really exciting look at this intersection from a different very different perspective. Each of these courses runs the full Stanford semester. Again, which is 12 weeks on will be here, half of those weekends, so six weekends and classes will run Friday and Saturday, so you'll have one session on Friday, one session on Saturday for each of these classes bioethics will meet once a month during the weekend.

The first quarter is scheduled to start June of next summer (2021), the second quarter delves a little bit more into strategy. *Strategy*: how do we think about business strategy, business principles, about gaps and growth, Porter's Five Forces, very basic business strategy principles that we need to understand to be successful. To marry up with accounting is corporate financial analysis. This is things like net present value valuation, and since we're doing this at Stanford, we're going to think about this from a large organization perspective, but also from things like a startup perspective. How do you think about looking at the financial statements of new organizations or building a business plan? *Clinical informatics strategy* is the class I teach, which is really asking the question about how do we think about using technology to improve quality and reduce costs? We'll get into concepts here about scale disruptive innovation network economics business process improvement all applied to a series of cases that were designed for this class, and most of which were designed specifically for this class that really kind of build on this structure of healthcare. How do we understand both the relationships of business model transformation and technology and healthcare? And again *Bioethics*.

For quarter three: we start with quarter three with *Marketing Science and Patient Engagement*. As we've built this program over time. One of the key opportunities is to think about applications of marketing and marketing science and to healthcare. Right now healthcare is usually a one on one patient encounter rather than a one to many. We're thinking about even right now about COVID... how do we get messages out to people about the benefits of masks? …and how do we tailor different messages to different groups that have very different beliefs? That is a marketing challenge not a medical challenge. *Patient engagement*: how do we get people to understand, where patients are at and think about the right tools and resources to help patients accomplish their own health goals? *Healthcare operations management*: lots of applications of this, how do we think about the use of decision models in healthcare? Right now, actually, I was just on a call about thinking about testing strategies and school openings. That's an operations management kind of approach. How do we think about queuing, scheduling? All these operations service operation challenge that we face in healthcare. So that's a really exciting course lots of applications to the material in lots of different environments. *Data Driven medicine* is data science class where we're going to be looking very specifically, at the ways in which we're using data today, machine learning artificial intelligence data lakes… this is going to be a real blend of lots of different ways we're thinking about the value of health information technology and data around Stanford. *Social entrepreneurship* and the *Innovation Lab* is your required practicum course. Here you can see this runs both through quarter three and quarter four. In quarter three you'll begin to work on your core or your project concept and you'll evolve that through quarter four. That's will be done mostly in groups… That could be thinking about health IT applications in an existing setting, writing a business plan for a new company, lots of different ideas about how we can use that class.

Finally, in quarter four, coming to the conclusion of the program. We start with *Modeling Biomedical Systems*. This is really a course around data architectures and understanding how we organize data so we can be really effective in analysis. *Quality and Safety and US* *Healthcare System* is the final informatics course. This is really a data visualization class, it's a flipped classroom model data visualization and biostatistics class. It's the flipped classroom model where we're going to start with reports that we get throughout the healthcare system and think about what the underlying data issues are from a statistical perspective, things like ceiling effects skewed data distributions, variation random noise. How do we understand that the reports that we have produced from the data that we have in healthcare. We'll wrap up with the second half of the entrepreneurship program the practical program and the last of the bioethics challenges.

As you can see this is a really rich program, a really rich and exciting set of classes that we put together, but it's also an intense program. Although the faculty know that we're designing this for working professionals, it's still full time Stanford program with the expected amount of rigor. Stanford is really a great environment to offer a program like this and has a unique set of resources to utilize. We've drawn from across Stanford campus to put on this program. The program is housed in the Clinical Excellence Research Center in the Department of Medicine,

and, is a permanent degree program of Stanford University. We have collaboration from a lot of different groups around campus, both in Engineering, BioDesign, the SURF Center, the BMIR (Biomedical Research Center Department), Biomedical Data Sciences, and our Stanford Center for Biomedical Ethics. A lot of different resources come together to put on this unique program.

As a student of the program, what do we hope that you'll get out of the program? We want you to get a greater understanding of operational clinical and ethical complexities that leaders face as they seek to optimize solutions. That says technology, but I really want to push more broadly to solutions. The coupling of technology and the business model innovation that is required. We want to build the management skills to lead multi-disciplinary teams. This is a program, not just for clinicians and one of our goals is to get you on a team. We're going to build the class and build the team. So we will have clinical and non-clinical personnel. So think about clinical personnel with technology personnel all working on the same team. We have to learn how to talk to each other and work together. We want to leverage data and technology tools and a variety of different settings, you're going to see a lots of a lot of these courses are built on case studies. We're going to see lots of different use of tools and a variety of different settings from the nut nitty gritty of kind of service operations to my course where I do Case on Alexa applied to population health. This program really runs the gamut of applications of technology in a variety of settings. One of the things about a program like this, when we offer it to working professionals every other weekend, is when you learn something on Saturday, you can apply it to work on Monday. We've heard this over and over again where students said, “you know, we had that discussion on Saturday, it was really engaging, and the same thing came up at work on Monday, I was able to shine, because I had thought through the issues and added a new perspective”.

Then we want to welcome our MCiM graduates program students and graduates into a new cohort of thought leaders in medicine at this intersection of medicine business and technology. As this program evolves over time, we're looking forward to a really rich general set of alumni that are really going to be thought leaders throughout the field of medicine.

So MCiM is open to individuals from a variety of backgrounds and we aim to have a student body that’s going to really bring a diverse set of perspectives and experience to the classroom settings. These in person classes are really going to be immersive discussion, focused discussion, based team based projects, and we want you to be able to learn from the other members of your team. That's how we're going to put together the class, representing these different backgrounds in this diverse set of experiences. On the website, we won't go through it today, we think there's an opportunity for people with these different backgrounds to come together and benefit from MCiM and move their career forward.

I keep talking about careers, and a really important part of coming to get a degree, like this is, is the idea, the recognition that to move forward in my career into a leadership role to move from a clinical to a management role, to move from an engineering to a management role or leadership role I needed a set of skills or experiences that they didn't provide to me in my core disciplinary training and that's where MCiM really comes into play. Since this is a Stanford program, what we want to do is broadly foster leaders, but specifically we want, what we’ve been charged with is thinking about how we're going to use this program to address gaps in diversity and inclusion. At the intersection of technology informatics and medicine were women and minority groups have been underrepresented in leadership roles, I think there's a huge opportunity and Stanford thinks there's a huge opportunity to use this program to address this gap. We want everyone to know that this is going to be one of our considerations and putting together the program. It was very successful when we did some of this at Duke, there's even more of an opportunity to do this here at Stanford.

Zoe. Do you want to talk a little bit about our application process and where we're at?

**Zoe Richardson:** Yes, thank you. As you all have heard Kevin say we are looking to develop a cohort of students with a variety of backgrounds perspectives and experiences. Our program follows a holistic admissions process. So, we do not require GRE or other standardized scoring. The only exception is TOEFL scores as that is a university requirement for individuals who have their first language as something other than English. Our applications will be available via the Stanford graduate admissions portal as of next week, September 1. Through this portal, you'll submit all of your required materials as I've noted here and this is also on our website. Please note that this is the portal where you will submit the three individuals for your letters of recommendation, not the actual letter of recommendation. And the transcripts that will be required to be submitted our unofficial transcripts. You do not need to submit your official transcripts at this time.

I urge you all to please look at our website we have put a lot of work and to really thinking about what type of questions you'll have as you're preparing to apply for this program. The website is a wealth of information. You'll also see that on our website we have multiple rounds of admissions. All those dates are listed out on the website are two essay questions and guidance for the statement of purpose is also posted on there for anyone who would like to get a head start on writing their materials.

So as I mentioned, round one will be opening September 1 our round two will be opening on December 15 as Kevin already mentioned. Our program is unique in that we start summer quarter not autumn. So our first cohort will be starting on June 21 of 2021. Before we go ahead and jump into questions, I do want to remind everyone that we will be offering these information sessions periodically, our next one is September 15. Our Website is a great resource for anyone looking to learn more about our program. However, if any of you ever feel that you have a question that's not accurately addressed, please feel free to reach out to us. I've listed our email, our email is also listed throughout the website. And please subscribe as that is the best way to learn more about what's going on with the program and our LinkedIn is available.

**Kevin Schulman:** I will say for especially for clinical faculty that are interested in the program, we're going to do rolling admissions. I know some people have schedules six months out, so if you apply early we will get your information back with plenty of time so you can set up your clinical schedules.

As we've been talking about developing this program across Stanford, we really received a huge amount of support by Lloyd Minor, the dean of Stanford School of Medicine, and has been a strong supporter of the program. I feel he recognizes that MCiM is going to provide students with the skills, knowledge and insights, to bring together technology in the clinical enterprise in entirely new ways. I think all of us have realized with the COVID pandemic that we need new sets of tools, so, thanks Lloyd for his thoughts and for wishing us well with this new program and for his support.

We've had some questions that have been submitted. And again, Zoe is monitoring the chat room. If there's additional questions that you all have, we're happy to take those now. Also, feel free to look at the website to find out more.

The first question we had is “how can MCiM degree aid my professional development or career pathway?” What we've seen in the past is you're going to gain some really highly applicable competencies, people are going to see that in your workplace from the time you start the program, let alone if you're trying to look move up in your career or make a switch between employers. A really highly applicable set of competencies and I've gone through the curriculum that might resonate with you. We're going to build a really strong network of faculty and alumni that are going to be there, not just while you're here on campus at Stanford, but also throughout your career. We have a really long reputation of creating great career relationships. Our goal is to get you through the program, but also to make sure you get the most out of the program by helping be available to you throughout your career. We also have a very strong career counseling program that we've set up through the school of Medicine's Bio Science career centers. We've been working with them throughout this program and this will help you with things like resume development networking targeted approaches, to looking for a job if you're making a transition. So that's a resource that's available to you, even if you're not thinking about making a transition, “How do I advocate for myself better within my organization” is an important piece of that. And then finally, you'll continue to benefit, after graduation, as members of our growing community in terms of programs and events that we will have here on campus over time.

The other question we had was regarding tuition and fees for the program. Fees for this program are set by the University. It is a full time graduate student program, so you're taking four quarters in a year, from June to June. The tuition would be $72,000 Stanford fees and expenses are not included in this estimate. So depending on if you're an employer sponsored program, our program will probably cross your fiscal years, so you might be eligible for two years, depending on how your employer sets this up if you get support from your employer. We'd be happy to talk to you more about that. MCiM is going to be CME accredited. Physicians can consider using CME funding towards the program costs if you have those. Stanford employees can use STAP or tuition reimbursement funding towards MCiM, unfortunately, Stanford doesn't offer tuition discounts for people inside or outside of Stanford for but we are trying to work with different departments and organizations within Stanford to see about sponsorship which Stanford does allow and Stanford does allow your employer to sponsor you in the program. Financial aid is provided through the Stanford Graduate financial aid office and financial aid is not available, unfortunately, for international students and there's no difference between in state or out of state tuition.

Next question. “Do you require work experience?” The answer is no. We do want to have some people that are right out of college, they want to think about the world through texting or Snapchat or all these technologies and we want them in the classroom with people literally we've had senior clinical faculty before who couldn't figure out how to turn their computer on. But you're going to have to demonstrate really strong experiences to make sure that not only are you able to do the work, academically, but how you're able to really meaningfully contribute to the MCiM learning environment. It's not just you as an individual that we're looking at, but we're also looking at how you are going to fit in this really unique classroom experience.

Next question. “Why is the format alternative weekends for on campus and not evening sessions?” There is never a perfect schedule for everybody. We really built this especially so our clinical colleagues or professional colleagues can build a schedule in advance. To do their full time job and complete the program so Friday and Saturday has kind of worked out as being a format that was attractive. You will have extra homework, learning is not just while you're here. You're going to be on campus every other Friday and Saturday. You're going to have teamwork and team projects to complete, online assignments in group work, all the classes will be in person, but you'll have problems sets and things like that, that span the class weekend. This is not a technology program, in none of the classes are you going to be required to do hardcore data programming. This is really a management program, we're working very hard with all the faculty for the program to help them shape their curriculum specifically to address these topics, even if there's a data science class for people wanting to build algorithms, the data science class we're going to build is for people working with people building advanced algorithms.

Faculty representation. I've talked to MCiM about our drawing faculty from different disciplines, across Stanford and we're drawing faculty that are really experts in their fields, but also reflect the interdisciplinary nature of the program. A lot of faculty will come from the department medicine. We've got a very strong relationship with Management Sciences and Engineering. For their program, Biodesign, Bioethics, our goal is to get people in the classroom, not only who are subject matter experts, but who are really interested in the kinds of problems that we're trying to tackle. I think this is really the magic of a program like this. As we select business faculty, we talked to them a lot about what you want to get out of a program like this, how to present the material to you, how to use healthcare and non-healthcare examples.

It's really important for us to realize that these business tools are used in a variety of settings. We also want to speak to all the different people in the classroom, some of whom might come from a technology firm, a pharmaceutical firm, an insurance company, etc. and what tools are going to work for them. We've also built the faculty advisory committee as part of our MCiM community and featured are on our website. Their role is in advisory capacity program. Some of them do teaching the program, but not all of them, but all of them are accountable or help ensure that you get what you want out of the program.

**Zoe Richardson:** I just wanted to chime in, someone might have thought that the advisory faculty are the teaching faculty. Our teaching faculty are not posted on the website yet as we just haven't been able to do that at this time. As Dr. Schuman mentioned, some of the advisory faculty will also be teaching faculty, but some of them will not be teaching. They will, however, all be part of the MCiM community, there is a slight difference.

**Kevin Schulman:** So, We have a question about accreditation and so as a Stanford degree program MCiM has been accredited by the Western associations of Schools and Colleges. We are an accredited degree program, that was part of the Stanford review process to allow the program to be available. We've also been accredited by our CME program with huge amount of CME credit. The CME office, possibly by January, will also be able to offer continuing education credits across different clinical disciplines nursing and pharmacy, however right now it's just a MA category one credit.

Lots of questions about the pandemic. “Do you plan to host classes online?” Stanford University follows the regulations that are put in place by Santa Clara County. We are starting in class in June of 2021 for the following year. As of right now, we're planning on holding all of our classes in person, assuming that again that the environment is going to change pretty dramatically regarding COVID next summer. Nothing is predictable with regards to this epidemic, if the county doesn't let us have an in person classes, then we will have to think about an online instruction.

“Time commitment to the program”. It's a rigorous full time program. What that means is we do know we want people to be working full time. Your time commitment is the every other weekend that you're here. Stanford allocates three hours of prep for each hour in class, that's going to vary between our programs, but you will have homework on nights and class team meetings, problem sets, projects, so if you join the program, I will promise you a rigorous experience. You're going to have to be really disciplined with your time. We have a long track record of people being able to accomplish both, but you are going to have to make a lot of choices and unfortunately sacrificing your personal life while you're doing working and taking a program like this. The group assignments are team based and you have flexibility to schedule that based on the team that you're assigned to in the class. On the weekends that you're here, we're really going to do activities to build you as a professional cohort build, opportunities for collaboration, get to know each other in the classroom and then we'll also do other professional development activities, some related to careers and career services, but we will also bring in speakers to help you understand and think about career opportunities building from this program.

**Zoe Richardson:** Someone is asking, “What are the weekend session hours.?” The Friday, Saturday sessions are full day sessions. Roughly from 8am until 4:30pm. As Kevin mentioned the weekend sessions are really fantastic in building camaraderie between the students helping you have that strong relationship with faculty. We will have guest speakers and we will also have other professional development opportunities attached with those while you are on campus.

**Kevin:** So the cost is Stanford Graduate School. The Graduate tuition Stanford University for four semesters. You know, in terms of the in terms of the weekend classroom experiences. I think you really build a strong set of relationships through this program you're all going to be going through a pretty intense experience together. But at the back end of it, everyone really enjoys the people that they meet through the program, the relationship they build. And again, that stays with you throughout your career.

**Zoe Richardson:** And some additional questions “Are there units that need to be taken to advanced candidacy?” Which the answer is no. We do not require students to have prerequisite courses or to have certain amount of units. They do need to have at minimum, an undergraduate level degree. If you are an international student or someone who received your undergraduate degree overseas, you are also eligible to apply. Stanford has a wonderful graduate admissions website that will match up to what your International degree is to make sure that it matches to a bachelor level degree.

**Kevin Schulman:** Zoe you know one thing we haven't have made clear as for the classes themselves, these classes are only going to be open to the MCiM cohort. So it's not like we're picking classes around Stanford and sending you to them. These are classes, put on for you all, there might be one or two other people in the room but basically these are unique sections of classes just the MCIM program.

**Zoe Richardson:** And it looks like there's another transcript question. So if you do have postgraduate academic experience, you should include those in your application. Per Stanford, any institution that you attended for at least one academic year should be an institution that you include your transcripts from.

Kevin, this is a great question for you. “What if you are interested in applying to this program, but you're not in a leadership role currently?”

**Kevin Schulman:** That's a great question. Our expectation is that, in fact, the students who apply to this program, are not in a leadership role they either realize they need a different set of skills to move up in their career, have aspirations to move into a leadership role or, talking to your employer that you want a different career trajectory. So, in terms of career search switching or position switching, this is a program to help facilitate that. When I talk about leadership, I talked about the end of this presentation, it doesn't have to be the day you finished this program. Our vision for the graduates is over three to five years, or that you know when people move out of this program, they are going to have the skill sets to really accelerate their career in this kind of time frame. Some of the people that take the program actually don't look for a new job right afterwards. It's really up to you. Some people just realize they need the skills that we're providing even to be successful in what they're doing today. Other people want the skills to move up in their career or change careers and i think it's a great program because it has the same set of background will accomplish both goals. I should say also that of all the degree programs I've built over the years, this has been the most fun and the most directly applicable to really helping people, day to day and then work environment.

**Zoe Richardson**: And just because there's also a couple of questions. As a reminder, we are recording this. We will have the recording slides and then accessibility able transcripts available on our website.

**Kevin Schulman**: I really want to thank everyone for joining us today. As Zoe’s said there's another MCiM webinar if you want in a couple weeks. We have lots of information on the website. We spent a good part of the summer really building it because it's a new program and unique program so you can get a better feel for the courses. For the program itself or a little bit of the motivation behind the program and the kind of experience that you'd have and the kind of experience that this program, will give you in terms of your future career options. As I said, this is been the most fun program master's program that I’ve built amongst the several I built. Stanford as an environment, put on a program like this, as you see the kinds of courses that we put together and the kinds of students that we attract, I can't imagine a more exciting environment to do all this together. So thank you all very much and we are happy to answer more questions, as you go through this process. I think, an advanced degree like this for working professionals is a big commitment, but at the same time, I can tell you from decades of very happy customers, this is a real opportunity, especially in the Bay Area to stay engaged at work and to really move your career forward with this kind of pedagogy at Stanford. So thank you.

**Zoe Richardson:** Alright, I don't see any more chats coming in. If anyone has any additional questions, please feel free to email us again I have our mciminquiry@stanford.edu email listed here and as Dr. Schuman mentioned, please check out our website as that also has a great source of information. Thank you all so much for your time this evening, I hope you all are staying safe and staying well.