

MBA 779: Special Topics - Bioscience Entrepreneurship
Fall, 2009 Time and Place TBA
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Course Objective

To allow Creighton Bioscience Entrepreneurship Program students to use the skills gained in the spring Technology Commercialization course to research the viability of, and structure a plan for, commercializing a bioscience research technology invented by a student or faculty member at Creighton University or the University of Nebraska Medical Center through either a licensing agreement or a new venture start-up. This course will be hands-on, team-based, and research-oriented and will involve gathering data from archival data bases and on-line and hard copy sources such as the internet and medical and other libraries, as well as interviewing people involved in the technology creation process, including inventors, researchers, and potential suppliers, customers, distributors, and funders, along with other industry sources. Final projects and posters will be presented to a group of investor judges, who will “vote” on the project most likely to *succeed in commercialization. This final session, including a cocktail reception and graduation ceremony, are scheduled for 6 p.m. Thursday November 19. If anyone can't make it, we need to know right away, as everyone is required to be present and present.*

Project Options and Contact Information

Each student team will choose a project. This semester, we have three projects that have been proposed by team members. These include an iPhone application for diabetes management (Steve Kelly – telepsychiatry team); autopsy products (Sam Bhatia – teleurology team); and consumer pharm integration records system (Andrew McLaughlin – telemanacine team). However, if others would like to propose their own projects, you are welcome to contact Dr. York prior to the course's start. Each student team will choose a project and then work with their respective project contacts throughout the ten weeks of the course. If these are the projects chosen, all teams will be working on startup business plans. Teams will likely want to rename themselves based on the projects chosen.

As in last semester, Creighton technology transfer office contacts will be Lee Fenicle/Mary Ann Wendland – 280-3652 - lfenicle@creighton.edu Wendland@creighton.edu . Once the projects have been selected, you will also have contact information for the researchers involved, as well as for Dr. Prafulla Raval, our teams' science mentor from Creighton Medical School. Each team will also be assigned a business mentor with expertise in financing ventures.

Grading and Course Deliverables

To earn an A in this course, you need to take charge of leading at least one key area of the project (i.e. market research, report writing, presentation, etc.) or be the overall project manager, take responsibility for completing agreed upon team assignments on-time and with a high degree of quality, be a positive contributor to your team's "culture," be present at and prepared for every weekly meeting with Professor York, turn in all required assessment instruments, peer evaluation and your journal, and be available to help on an as-needed basis in any other areas required to make the project a success. Note that the project "inventors" do not have to serve as team leaders. You know each others' strengths and weaknesses now; choose each person's position to maximize the chance of participation and success.

To earn a B in the course, you need to make positive contributions to several key areas of the project, take responsibility for completing agreed upon team assignments on-time and with good quality, be a positive contributor to your team's "culture," be present at and prepared for most weekly meetings with Professor York, and turn in all required assessment instruments, peer evaluation and your journal.

To earn a C in the course, you need to make positive contributions to at least one key area of the project, take responsibility for completing your team assignments on-time and with average quality, not be a negative contributor to your team's "culture," be present at most weekly meetings with Professor York, and turn in all required assessment instruments, peer evaluation. Failure to meet the minimum requirements for a C will result in a grade of F.

Course deliverables include:

- * Business Plan PowerPoint Presentation (20 minutes, with ten minutes Q&A)
- * Written Business Plan (15-20 pages, not including references)
- * Personal Journal
- * Peer Evaluation (with some level of commentary explaining your ratings)
- * Assessment Instruments (teaming, leadership, interaction frequency)
- * Internship write-up

As in last semester, peer evaluations, along with observations of each team member's participation and the quality of their work, will determine final grades.

Course Resources

In addition to Lee, Mary Ann, and me, I strongly encourage you to use the Reinert and Health Sciences libraries and librarians. They can assist you with searches, obtaining materials, providing sources of information, and even understanding key concepts in the sciences. Chris Carmichael (ccarmichael@creighton.edu, 280-1757) is our business reference librarian at Reinert and Richard Jizba (rjizba@creighton.edu, 280-5142) is the head health sciences reference librarian. Both are available by email and phone for questions and to make appointments. I have alerted them that you will probably be

contacting them. Working with them early on is likely to really speed up your market research. I also encourage you to use the services available through our technology transfer office, especially for NERAC searches. Be sure to refer to your texts, articles and course handouts from last semester. This will help with licensing agreements, patent searches, FDA regulations, and so forth. If it would be helpful, I can arrange an extra class during the semester on financing issues. Two things that are very important this semester are the quality of research that you do and the thoroughness with which you complete your plan. I will be going over your last semester's plan at our first team meeting to note areas for improvement and expansion and to highlight differences between those and actual business plans.

Weekly Course Schedule/Assignments Due

Week 1 – Monday, August 24 – 6 -9:30 p.m.

- 6:00 Pizza!
- 6:15 Sharing of summer internships experiences (turn in reports)
- 6:45 Break (discuss possible projects with team and settle on two weekly team meeting times)
- 7:00 Review of business plan outline and teaming skills
- 7:45 Break
- 8:00 Team time tasks

- Choose team projects, team roles and tentative deadlines, especially for week 2

- Set up regular weekly team meeting time (roughly 1 hour) with Professor York; I am available pretty much any time day and night and weekends, but please choose a time that everyone can make each week regularly.

- Decide how your team plans to communicate and share work load, tasks, deadlines and team leadership responsibilities; spend some time debriefing last spring's experiences and discussing the changes you'd like to make to be more effective

- Get NDA (confidentiality agreements) process underway with your inventor (generic version available on course BlueLine).

- Create rough draft of time line and hours budgeted for project (roughly ten hours per week per student for 10 weeks, including class time and meetings – around 400 hours per team – should include consultation time with clients, research time, writing time, etc.)

- Prepare one minute elevator pitch and select a team member to give it.

- Begin work on second week's assignment

- Turn in internship papers

- Note: I am happy to review your last spring's projects with you on a first come, first served basis to discuss what needs to be done to improve on them for this semester. Alternatively, we can do this at our first team meeting.

Weeks 2-10 – Meet with Professor York at a mutually-agreed-upon time for progress reports. Students should email copies of weekly drafts due at least 24 hours prior to each meeting, along with your team's hourly report (budgeted vs. actual) and any

questions/issues, etc. Your deliverables for each meeting should follow the following outline, though some projects may vary depending on the topic and direction taken.

Week 2 (Aug. 31-Sept. 6) – concept statement due; identifies the technology being researched in layman’s terms and describes what its competitive advantage is over existing technologies and competitors (that is, answer the so what question: why would anyone buy or use this new technology?); weekly and total project budget (hours) due; need to have met with client contact(s)

Week 3 (Sept. 7-13)–IP and regulatory investigation completed (patent position, trademark, copyright, FDA regulations and time lines, etc.). How strong is the IP protection for this technology? What is the time line for development?

Week 4 (Sept. 14-20) – marketability analysis draft due; identifies key information such as market size and opportunities (are there other uses/markets besides what the researcher has identified?); trends in the industry

Week 5 (Sept. 21-27) – existing and potential competitor analysis (look at the research being published in the area as well as current competitors). Where is your client in the mix? Ahead or behind research-wise? Funding-wise? Organizationally?

Week 6 (Sept. 28-Oct. 4)– market entry mode draft due; identifies potential distribution channels for getting the technology to market and recommendations for which is optimal and why

Week 7 (Oct. 5-11) – potential customer and revenue draft due; identifies who might be potential customers for this technology and the best way(s) to approach them (specific contact information should be included), along with pricing suggestions and estimated volume of sales.

Week 8 (Oct. 12-18) – Assuming that you are planning on a startup, at least initially, what sort of organization and resources (i.e. infrastructure) will be needed? Where would the product or service be produced and by whom? Who will market the product and how? What type of organization and team are needed to manage and operate the venture and how should their compensation and work be structured?

Fall Break (Oct. 19-25) Please note: I will be on break the week before and not back until this week, so we’ll need to figure out how to have our team meetings in a creative way! I’m open to anything – Skype?

Week 9 (Oct. 26-Nov. 1) - time line and funding requirements draft due: identifies steps required to get the product to market (or license status) and the funds and activities needed to get the product to that point; also identifies possible funding sources. How much money is needed to add enough value to

this project to get the technology licensed or ready for start-up and what is the cost breakdown? Who are likely sources of funds? How much funding is needed over what time period? Prepare a pro forma of a cash budget monthly for three years or until you are cash positive, whichever comes first.

Week 10 (Nov. 3-9) - critical risks, references, and final presentation draft due: identifies concerns/challenges that the new technology may face in the commercialization process and provides sample PowerPoint slides to be used at the last class to present your ideas to the class and to your clients.

Final Exam Presentations, Reception and Graduation—Thursday, November 19 at 6. This class should last about two hours and will be at the Harper Center. Note: two hard bound copies of your plans are due on the date of the presentations. Your personal journals, your peer evaluations of your and your project team members' contributions and responsibilities, any communication instruments you've been filling out, and a final leadership and teaming assessment instrument, along with a summary of the hours worked, should be turned in at the same time as the final plan. All plans should be marked confidential. Also, you will be asked to prepare a poster for the reception. More detail on that will be presented later. Poster sessions are common in the scientific community, so it's a good skill to have under your belts!