

Fall 2008

UAP 5774: Economic Development Studio

Alexandria Wednesdays 7 pm to 9:30 pm* Polycom classroom 1021 Prince Street	Blacksburg Wednesdays 5 pm to 7:30 pm* 702 University City Boulevard, Room 207
Professor: Heike Mayer e-mail: heikem@vt.edu Phone: 703/706-8122	Directions: http://www.econdev.vt.edu/directions.aspx Professor: John Provo e-mail: jprovo@vt.edu Phone: 540/231-4004

*Exceptions noted in the calendar.

Course Description

This course is a practical learning experience for planning students interested in economic development. Students will serve as “consultants” to agencies interested in addressing a particular planning issue. We will regularly interact with government agencies and community partners around the state.

We will work as a team and will use tools of economic development analysis and strategy. This year the class will be held in two locations, Alexandria and Blacksburg. The work for the studio project will be conducted by all the students enrolled in both campuses.

This is designed to serve as a final pre-professional experience before you exit your academic careers for work. As such, you have a commitment to the work at two levels. As students you are expected to devote at a minimum scheduled course time and at least an additional 3 hours outside of class per hour of class time. As emerging professionals you are expected to contribute as consultants would. You will be given broad outlines of a project and will be responsible in consultation with your managing partners (faculty) and clients for filling in the details. Your ownership of such details will extend to a mutual responsibility for the work of your teammates. Managing such relationships is a part of any professional experience and will be addressed in further detail in “360 degree” evaluation sessions during the class.

Course Objectives:

- Conduct a “real world” study for a client involving data gathering, analysis, writing and presentation.
- Become familiar with tools and strategies in economic development.
- Understand project management skills and requirements.
- Gain experience working in a team for a client.

Studio Project

Title: Bringing Open Innovation to Economic Development in Virginia

The competitiveness of regional economies depends on the ability of firms and research institutions such as universities or R&D laboratories to generate new ideas and to commercialize innovation. Knowledge-based industries have gone through a dramatic transformation process in the ways in which they organize their innovation efforts. Rather than concentrating R&D in-house in centralized laboratories, firms are increasingly interested in an open process of idea generation and innovation. The business scholar Henry Chesbrough calls this the *Open Innovation Model*. In the open innovation model, firms develop strategic research alliances and they engage in technology transfer and licensing processes with external partners.

And, moreover, firms are increasingly looking towards universities for new ideas and innovation. Such university-industry partnerships are central to the so-called open innovation model.

While economic developers are beginning to explore this topic, there is not yet a clear understanding of how communities, universities/colleges and others can apply this model to practices with potential for stimulating regional economic development. Potential benefits from facilitating university-industry interactions may include the ability to increase the application of new ideas to commercial opportunities, faster market responses, increasing the scope of innovation, and the ability to increase the competitiveness of a knowledge-based economy. As innovations move to market, community colleges become an increasingly important part of the mix, with responsive, flexible partnerships between companies and community colleges spanning curricular development and equipment provision helping move new products to market.

Like other states, the majority of Virginia's key higher education assets are concentrated at some distance from its economic and population centers. The state's largest university – Virginia Tech – is a land grant institution located some distance both from Northern Virginia, the state's burgeoning high tech hub, and the largest concentration of economically distressed communities in Southside Virginia. In recent years Virginia Tech has developed a distributed research model that connects the university's assets to these regional economies. In 2003, the university opened the Institute for Advanced Learning and Research in Danville with the goal to "seed" the future basic economy of Southside, a region ailing from the loss of jobs in traditional strengths like textile and furniture manufacturing. The facility sits adjacent to a major industrial park and an advanced community college training facility, encouraging project partnerships. In June 2008, Virginia Tech announced the creation of a research center in Arlington County. Located in the Rosslyn-Ballston corridor, it will leverage a proximity to scientific research agencies such as The Defense Advanced Research Projects Agency and the National Science Foundation as well corporate partners in the high-tech and biotech industry sectors. What distinguishes these centers from the campus model is their proximity to corporate partners and their mission to contribute to regional economic development.

The students will consider these Virginia Tech examples from a number of perspectives.

- In what ways do major industries in Northern Virginia and Southside apply the open innovation model? How are they working with these Virginia Tech centers? What benefits/risks are apparent in those efforts?
- In what ways does Virginia Tech apply the open innovation model through these examples? What benefits are realized and what challenges are apparent in these efforts?
- In what ways can communities support the open innovation model? What strengths and weaknesses do these communities bring to such an effort? What are the likely risks/rewards for the communities?

The studio project will result in the following:

- Analysis from industry, university, and community perspectives on the open innovation model in the two regions. Preliminary analysis of gaps and assets that would advance the model.
- Recommendations regarding the application of the open innovation model to regional economic development to Virginia Tech, local jurisdictions, and state government agencies such as the Virginia Economic Development Partnership, and coalitions between industries, education, and government such as the Chesapeake Crescent Innovation Alliance.

Requirements and Grading

The grades in this class will be based on the following criteria:

- **Preparation**: Your efforts and contributions to the group's work (inside and outside of class)
- **Leadership**: Your role in contributing to progress of the team.
- **Participation**: Your contributions inside and outside of class (with client, with your colleagues)
- **Professionalism**: Seriousness of your work and contributions
- **Team work**: Your role in the team
- **Quality of products**: Quality of your work and contributions to milestones, presentations, etc.
- **Milestone achievements**: Quality of your contribution to the milestones

Grades will be assigned by faculty to each student team based on faculty assessment of the criteria above.

360 degree feedback

The instructors will conduct period evaluations of the class' progress and will solicit feedback from students throughout the semester. The process is described in detail on page 6 of the syllabus.

Readings

Readings will be posted on Blackboard as needed. Students are also expected to conduct literature research on their own depending on their tasks in the project.

Milestones:

The Milestones represent assignments that – in sum – will comprise the final report for the client. Students in teams will prepare these interim products and present them in class. We expect that each interim product will be researched, written and presented in a professional way. Changes in the due dates and the number of milestone products should be expected depending on client needs, data availability, etc. For a more detailed discussion of the milestone see below.

Late or Missed Milestones

For this class, it is instrumental that we achieve the milestones as indicated in the schedule. We will define the nature of the milestones in the beginning of the class. You and your colleagues will be responsible for timely progress towards the completion of the milestones. No late submissions are accepted.

Virginia Tech's Honor Pledge

We expect that all assignments in this class conform to Virginia Tech's Honor Pledge as well as to the usual academic standards. The pledge states that "I have neither given nor received unauthorized assistance on this assignment." This means that you will refrain from plagiarism and cheating or from any other form of receiving unauthorized assistance.

For more information, see: <http://www.honorsystem.vt.edu/>

Special Needs

Any student with special needs or circumstances should feel free to meet with us during office hours.

Readings (will be posted on Blackboard)

See list at the end of this document. Additional readings may be handed out in class.

<u>Calendar</u>	<u>Date</u>	<u>Topic</u>	<u>Readings & Class exercise</u>	<u>Milestones</u>	<u>Joint Meetings</u>
Week 1	August 27	Introduction			
Week 2	September 3	What is innovation? National and regional trends & innovation actors	Malecki, National Governor's Association , Lester, SRI	Team Formation	Joint Meeting from 6.30 pm to 7.30 pm
Week 3	September 10	Open innovation from the perspective of industry, university, and government	Chesbrough, Freburg, Morrison, Cooke, Bercovitz Guest speaker: Clients TBA	Milestone #1: Develop Open Innovation Synthesis due before class	
Week 4	September 17	National examples of regional innovation systems	ASU, Michigan, Hampton Roads, WIRED regions Guest speaker: Linda Fowler, US DOL	Milestone #2: Lessons learned from around the country due before class	Joint Meeting from 6.30 pm to 7.30 pm
Week 5	September 24	No class, work in teams		Milestone #3: Group work plans due September 26	
Week 6	September 27	Study Design & Methodology	Discuss group work plans	360 degree feedback	
Week 7	October 1	Economies & innovation assets, NoVa & Southside	Readings: TBA Guest speaker: TBA		
Week 8	October 8	No class, work in teams			
Week 9	October 15	No class, work in teams			
Week 10	October 22	Discussion of team progress		360 degree feedback	
Week 11	October 29	Interim presentation(s)	Teams present their work	Milestone #4: Group presentations & interim write up due before class	Joint Meeting from 6.30 pm to 7.30 pm
Week 12	November 5	Comparative analysis and synthesis	Class discussion & summary/synthesis		Joint Meeting from 6.30 pm to 7.30 pm
Week 13	November 12	Discussion of final product	Discuss outline of report		
Week 14	November 19	Discuss final report & presentation	Discuss presentation	Milestone #5: Final group write up due November 19	
Week 15	November 26	<i>Thanksgiving</i>		Milestone #6: Draft Presentation due November 21	
Week 16	December 3	Final Presentation(s)		Milestone #7: Final Presentation 360 degree feedback	Joint Meeting (Time and location TBA)
Week 17	December 10	Final Report due		Milestone #8: Final Report due by 5 pm on Dec. 10	

Definition of Milestone

Milestone #1: Develop open innovation synthesis

The readings have given you a good overview of the concept of innovation and the notion of what open innovation means. For this milestone, your group needs to develop a synthesis of the readings and apply the insights you gained to your team's perspective (either university, industry or government).

Milestone #2: Lessons learned from around the country

Around the country, cities and regions are trying to develop models that promote innovation and competitiveness. Most of these efforts involve universities, government entities and industry partners. Notable efforts can be found in Phoenix, where Arizona State University is developing a new model of the so-called "New American University." In addition, various regions have received federal funding under the so-called WIRED grants. For this assignment, your team will pick one region and analyze the case and develop lessons learned from these cases. Pay particular attention to your team's perspective (university, industry, government).

Milestone #3: Group work plans

Studios heavily depend on the ability of the teams to conduct a well planned study. You team will be responsible for developing a work plan and study methodology. Make sure that you address the following questions:

- What research approach will you take?
- What are you team's data sources?
- Where do you get the data?
- How will you analyze the data?
- Who will be responsible for what kind of task?
- What is the timeline of your work and what tasks do you need to accomplish by when?

Milestone #4: Group presentations and interim write up

At this point, your team will present the interim results in class. You are also responsible for preparing an interim product.

Milestone #5: Final group write up

The final group write up is your team's final report.

Milestone #6: Draft presentation

The draft presentation needs to be prepared by all three teams. John and Heike will review and give feedback.

Milestone #7: Final presentation

This final presentation will be made to the entire class and to the clients.

Milestone #8: Final report

The final report is the end product for this class. It combines the three group final reports and integrates the various perspectives. You will also need to synthesize and develop a cohesive introduction and conclusion and possibly recommendations for economic developers, Virginia Tech officials and industry representatives.

360 Degree Feedback

In advance of each scheduled feedback session you will be asked to review the grading criteria above and provide an assessment of your perception of your team's work, the work of other teams, and the faculty. The purpose of these submissions will be to inform faculty of team progress on grading criteria and allow faculty to address any issues arising over the course of the project that may affect the work product.

By 5 pm the day before each scheduled session email faculty a completed table in the form, below. Rank each criteria 1-5 (5 being high) or N/A if you feel it is not applicable or you lack information to rank.

	My team	Other teams	Faculty
<u>Preparation:</u>			
<u>Leadership:</u>			
<u>Participation:</u>			
<u>Professionalism:</u>			
<u>Team work:</u>			
<u>Quality of products:</u>			
<u>Milestone achievements:</u>			

These submissions will be confidential and shared only with the faculty. The results may be used by faculty to facilitate a brief discussion in class to address any performance issues or to identify issues to discuss with specific teams.

Readings for the first three weeks (these are posted on Blackboard)

Week 2: What is innovation? National and regional trends & innovation actors

Chapter 4 and 5 in Malecki, E. J. (1997). *Technology and economic development* (2nd ed.). Essex: Addison Wesley Longman.

National Governors Association, & Pew Center on the States. (2007). Investing in Innovation. Retrieved August 27, 2007, from <http://www.nga.org/Files/pdf/0707INNOVATIONINVEST.PDF>

Lester, R. K. (2005). Universities, Innovation, and the Competitiveness of Local Economies: Summary Report from the Local Innovation Project - Phase I. Retrieved December 28, 2006, from <http://web.mit.edu/ipc/publications/pdf/05-010.pdf>

SRI (2007). Virginia's Technology Opportunities. <http://www.virginiaallies.org/docs/VirginiaTechnologyOpportunitiesReportFinalTask%203.pdf>

Week 3: Open innovation from the perspective of industry, university, and government

Chesbrough, H. (2003). The era of open innovation. *MIT Sloan Management Review*, 44(3), 35-41.

Fredberg, T., Elmquist, M., & Ollila, S. (2008). Managing Open Innovation - Present Findings and Future Directions. Retrieved August 25, 2008, from <http://www.vinnova.se/upload/EPiStorePDF/vr-08-02.pdf>

Morrison, E. (2008). Open Innovation Models of Economic and Workforce Development: Institute for Open Economic Networks.

Cooke, Philip, 2005, "Regional Knowledge Capabilities and Open Innovation: Regional Innovation Systems and Clusters in the Asymmetric Knowledge Economy," In: *Clusters, Networks & Innovation*, Stefano Breschi & Franco Malerba (eds.), Oxford University Press, Oxford.

Bercovitz, J., & Feldmann, M. (2006). Entrepreneurial Universities and Technology Transfer: A Conceptual Framework for Understanding Knowledge-Based Economic Development. *Journal of Technology Transfer*, 31, 175–188.

OPTIONAL:

Chesbrough, H. (2006). Open Innovation: A New Paradigm for Understanding Industrial Innovation. Retrieved January 20, 2007, from <http://www.openinnovation.net/Book/NewParadigm/Chapters/01.pdf>

Week 4: National examples of regional innovation systems

Arizona State University & Phoenix, Arizona

Arizona State University. (2004). One University in many places: Transitional design to twenty-first century excellence. Retrieved August 25, 2008, from <http://www.asu.edu/president/udt/UDTwhitepaper.pdf>

Arizona State University. (2005). A New American University. Retrieved August 25, 2008, from http://mynew.asu.edu/downloads/New_American_University_July2005.pdf

Michigan

Michigan Initiative for Innovation & Entrepreneurship: <http://www.pcsun.org/miie.html>
Review the following report:
[http://www.pcsun.org/MIIE/BackgroundMIIEJune%202008FINAL%20 2_2 .pdf](http://www.pcsun.org/MIIE/BackgroundMIIEJune%202008FINAL%202_2_.pdf)

Hampton Roads

<http://www.hamptonroadsrp.org/assessmentphase1.pdf>
<http://www.hamptonroadsrp.org/assessmentphase2.pdf>

WIRED

Program overviews:

<http://wired-nation.net/wiki>
<http://www.doleta.gov/wired/>

Sample regions:

Kansas City: <http://www.onekcwired.com/>

Southeastern Virginia: http://www.pcfwd.org/initiatives_SEVA-PORT.asp

North Carolina's Piedmont Triad: <http://www.wired.piedmontriadnc.com/>