

**GEORGE MASON UNIVERSITY**  
**COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT**  
**Instructional Technology Program**  
**EDIT 895 (3 credits)**  
**Emerging Technologies**  
**Semester Year TBD**  
**Meeting Time/Days TBD**  
**Location TBD**

**PROFESSOR(S):**

Name:

Office phone:

Office location:

Office hours:

Email address:

**PREREQUISITE:** Admissions to PhD Program or Permission of Instructor

**Course Goals**

This course introduces students to emerging technology-oriented initiatives that have implications for the educational use of technology. The course covers a selection of readings from knowledge management practices in including: (a) communities of practice; (b) the development and use of knowledge audits, assessments of existing knowledge “capital,” knowledge assets, peer assists, and gap analysis. The students will apply these techniques (and associated web and other technologies) to learning problems of their own choosing.

**Course Assignment**

The course paper will be a knowledge-management analysis of a knowledge problem proposed by the student. This paper should be 20 pages in length, not counting references. The paper should reflect the work conducted during the semester. The paper should:

1. Identify a knowledge problem
2. Specify the technology tools used to describe the problem and the resulting map/conceptualization/”ontology”
3. Provide a knowledge map of the organization to whom this knowledge problem applies
4. Provide a map that shows knowledge generation, conversions, and flows
5. Use the above steps to describe the *current* knowledge situation in the organization pertinent to the problem.
6. Describe the more optimal knowledge situation (the one to which the organization should move, assuming realistic costs, etc.)
7. Identify “gaps” between the actual and the proposed situations (see TOC website <http://www.tocforeducation.com/thinkingtools.html>)
8. Suggest solutions for bridging this gap.
9. Describe the metrics that will indicate success.

In all cases, describe the technology used and its value (or lack thereof) in your work.

**Assessment**

Grades will be based on completion of course requirements and on the scope, quality, and creativity of the assignments, including participation in class and electronic discussions (as assigned). Incompletes in the course will be given only under unusually extenuating circumstances.

**Course Topics and Schedule**

1/22/03	Introduction to Knowledge Management Organizations & Organizational metacognition A process model <a href="http://incentives.dau.mil">http://incentives.dau.mil</a> <b>Selecting your knowledge problem</b>	Sallis - pp 1-27,
1/29/03	Ways of Looking at Organizations Knowledge maps As ways to analyze an organization <b>Creating a concept map of your organization</b>	Baets - pp 23-48, pp 83-110
2/5/03	Knowledge audits - a comprehensive as-is analysis Assessing available knowledge Assessing knowledge generation Assessing culture Assessing knowledge availability <b>Continue mapping the organization as an audit tool</b>	Sallis Ch 3 (handout), Conway (handout)
2/12/03	Knowledge and Knowledge Generation Information vrs knowledge, Tacit or implicit, Explicit, The Knowledge Spiral, Communities of practice <b>Map knowledge generation, conversions, transfers, flows</b>	Baumard - pp 52-77
2/19/03	Describing the knowledge domain – ontologies and taxonomies <b>Graphical representation of an ontology of your organization/community’s knowledge</b>	<a href="http://www-ksl.stanford.edu/kst/what-is-an-ontology.html">http://www-ksl.stanford.edu/kst/what-is-an-ontology.html</a> <a href="http://www.clr.utoronto.ca/PAPERS/kmap.html">http://www.clr.utoronto.ca/PAPERS/kmap.html</a> , Sparrow - pp 24-50
2/26/03	<b>Presentation and discussion of the as-is knowledge environment of your organization/community</b>	
3/5/03	Is your organization a learning organization? Characteristics of a knowledge-enabled (learning) organization Individual and Organizational Learning Individual - Cognitive models, OADI Organizational - Organizational cognition SERTS model, Observe, Assess, Design,	Senge Ch1 Baets - pp 49-82; Lant &

	<b>Begin definition of “to-be” state of your organization/community</b>	
3/19/03	Models of knowledge transfer in Organizations The role of culture Boundaries/brokers Sharing Diffusion Best Practices <b>Work on “to-be”</b>	Wenger chap 1-5
3/26/03	Models of Knowledge conversion and diffusion Spiral of knowledge, Diffusion Feeding back into the system Lessons learned, Best practices Knowledge objects <b>Work on “to-be”</b>	Nonaka, Sallis
4/2/03	Communities of practice Communities of learning Social construction of knowledge Apprentice/journeyman/master Knowledge networks <b>Finish “to-be” state</b>	Wenger et al. chapter 9
4/9/03	Characterizing and solving wicked problems Education as a wicked problem Creating innovation through solution finding Diffusion of innovations <b>Define Gaps</b>	Senge handout
4/16/03	Knowledge Management Tools After action reviews Peer assist Knowledge assets Action learning <b>Define solutions to bridge gaps</b>	Engstrom – guest speaker
4/23/03	Knowledge Management Technologies Applying Knowledge Management Tools in Wicked Problem Solving <b>Continue working on “bridges”</b>	
4/30/03	Measuring success <b>Define metrics for success</b>	Measuring and managing value creation
5/7/03	Final presentations of Gap Analyses and Solutions	
Reading List	Melissie Clemmons Rumizen (2002); The Complete Idiot's Guide to Knowledge Management Paperback. Alpha Publishing.  Knowledge Management in Education: Enhancing Learning & Education by Edward Sallis, Gary Jones; Paperback -  Technologies in a Dynamic Environment by	required       required

<p>Walter J. Baets (chapter handouts)</p> <p>Tacit Knowledge in Organizations by Philippe Baumard (chapter handouts)</p> <p>Knowledge in Organizations by John Sparrow (chapter handouts)</p> <p>Building Organizational Intelligence: A Knowledge Management Primer by Jay Liebowitz; Hardcover</p> <p>Cultivating Communities of Practice by Etienne Wenger, Richard McDermott, William M. Snyder (2002). Harvard University Press.</p> <p>Everett Rogers (1995). Diffusion of Innovations. Free Press.</p> <p><a href="http://www.knowledge-nurture.com">http://www.knowledge-nurture.com</a> Click on Library  <a href="http://www.kmworld.com">http://www.kmworld.com</a></p> <p>Webbed learning by Seely Brown  <a href="http://www.aahe.org/change/digital.pdf">http://www.aahe.org/change/digital.pdf</a></p>	
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Additional resources:

KM basics: <http://www.skyrme.com/resource/kmbasics.htm>  
A knowledge audit: <http://www.skyrme.com/services/kmaudit.htm>  
Quick KM Questionnaire: <http://www.skyrme.com/tools/know10.htm>  
Identifying the value of a knowledge analysis: <http://www.skyrme.com/tools/bentree.htm>  
Knowledge flow template: <http://www.skyrme.com/tools/kinout.htm>  
Information resources management: <http://www.skyrme.com/insights/8irm.htm>  
Creativity is not enough: Converting ideas to practice:  
<http://www.skyrme.com/updates/u17.htm#creativity> and  
<http://www.entovation.com/innovation/10definitions.htm>  
Assessment, measurement <http://www.knowledgeboard.com/community/zones/am.html>