Goals and Objectives

(from 6/00 AQUAD plan, with 1/03 additions and 11/07 adjustments.)

Goal A. To provide graduate students with an understanding of the processes of critical thinking and creativity, and with ways of helping others develop these processes in a variety of educational, professional, and social situations.

Objective A1. Establish forms of evaluation of student process and outcomes that reflect the Program's educational philosophy.

a. Document the achievement of this educational goal through a self-evaluation on the part of graduating students in which they take stock of i) ways they have translated what they have been learning into strategies, materials and interventions for use in their own settings, and ii) directions that need further development.

b. Experiment with new, "authentic" evaluations for required CCT courses that provide more useful information about the course experience to the instructor, future students, and collegial reviewers, and allow current students to take stock of what they have learned about learning. (See also objectives A3c & d concerning making changes in response to these and other course evaluations.)

c. Compile documentation, especially theses and syntheses, that displays the range of ways graduates have become "constructive, reflective agents of change in education, work, social movements, science, [or the] creative arts."

d. Communicate with lapsed students to learn ways the CCT Program could serve students better; do the same for graduates and current students.

Exhibits and Assessment

[with Proposed revisions in brackets.
Note: in July '10 Grad. College of Ed. (GCE) became College of Ed. & Human Development (CEHD), which will be reflected in future statements of CCT's AQUAD goals & objectives]

Exit self-assessment (http://www.cct.umb.edu/selfassess.html) is now a capstone requirement. (Online copies of these self-assessments are included on http://cctrpp.wikispaces.umb.edu; password can be supplied to reviewers on request.)

P. Taylor's courses and, since 2009, CCT online courses use an additional form of evaluation that address 4 goals: inform instructor to make changes; inform current students' future approaches to learning; inform future students about whether to take the course and how to approach it; inform external reviews of the instruction and course. P. Taylor's evaluations are linked to his portfolio of courses and evaluations from some other courses are now linked to course descriptions.

Full-text syntheses are now available online linked to abstracts (http://www.cct.umb.edu/abstracts-TOC.html)
Reflective Practice Portfolios (see A1e below)
Recorded alum presentations, Our Lives And Other Worlds
[Revision: drop "theses and"]

The surveys are summarized in section IIC of the self-study report. The surveys sent to lapsed students did not receive any responses.

e. Institute expectation that students assemble reflective practice portfolios throughout their studies, with periodic presentation to and review by peers.	http://cctrpp.wikispaces.umb.edu is now expected as part of a required mid-program check-in. Reflective practice course, begun in 2008, includes final presentations of "plans for practice" (listen to recordings marked Reflective Practice on http://www.talkshoe.com/tc/16894)
A2. Attract and retain qualified and diverse students to reliable Program offerings.	
a. Maintain new enrollments in CCT programs of study to an average of 12-15 matriculants per year, increasing the proportion of matriculants going on to graduate. Increase this target only if faculty and staff support are available.	Average (2002-10) = 15 (including Certificate students) Proportion graduating steady at 57-58% for several years. Recent steps to improve this rate, http://www.cct.umb.edu/SupportToCompletion.html
b. Promote the new CAGS Concentration in Facilitating Reflective Practice made possible by a partnership with the Educational Administration program and recruit one-three students for each summer's cohort.	Put on hold in early 2000s by Leadership In Education Chair. In 2009 Departmental/Program leadership decided against reviving the partnership. [Revision: Replace previous objective with "b1. Promote the new Science in a Changing World track made possible with advising input from faculty in CSM and CLA."] [Revision: Add "b2. Coordinate with other Programs and tracks so that CCT courses can serve their students, e.g., http://candi.wikispaces.umb.edu/LTETtrack and possible CAGS in Ed. Leadership."]
c. Maintain a reliable roster of CCT courses allowing students to specialize in the four areas listed in the Program mission and the certificate foci of Creative Thinking at Work, Science in a Changing World, and Gifted and Talented Education.	CCT course list, http://www.cct.umb.edu/courses.html Students have not been aligning themselves with the four specialty areas, so CCT materials were reframed in 2008: "The elective courses allow students to define specific areas in which they explore their CCT-related interests—for example, 'creative thinking at work,' 'science in a changing world,' 'gifted and talented education,' 'critical and creative thinking in literature/arts/music,' 'dialogue and collaboration in organizational change.'" http://www.cct.umb.edu/futureyears.html [Revision: Replace "specialize in the four areas listed in the Program mission and" with "define specific areas in which they explore their CCT-related interests, especially..." Drop "Gifted & Talented Education" as a certificate foci, because this did not develop.]
d. Maintain course enrollments that ensure that no more than one course per year is cancelled for lack of sufficient enrollment.	Achieved by offering required courses every 3rd semester (since '08) and by promoting courses to the LTET non-licensure M.Ed. track

e. Review and streamline the published course offerings so the Graduate Bulletin reflects closely what is available on a regular basis.	http://www.cct.umb.edu/futureyears.html shows what the Program is likely to offer in the future. (WISER and the Graduate Bulletin omit courses that have not been offered for several years.)
(g. See Objective A1d.)	
h. Maintain a system of advising current and prospective students that attends both to general issues about CCT studies and students' particular concerns.	http://www.cct.umb.edu/handbook.html http://www.cct.umb.edu/SupportToCompletion.html
i. Make effective use of computers and other technologies to recruit and advise students.	http://www.cct.umb.edu http://www.cct.umb.edu/welcome.html http://www.cct.umb.edu/newadmitlinks.html http://www.cct.umb.edu/handbook.html http://www.cct.umb.edu/competencies.html CCT database (snapshot) Monthly news
j. Maintain or increase the i) quality and ii) diversity of students admitted to and retained and graduated by the Program.	i) Of the students admitted 2003-10, the average GPA is 3.17 (coefficient of variation 15%, N = 112 [of 138]), figures that are almost identical to those for the 2002-3 AQUAD review. ii) Matriculating students of color and non-European foreign students averaging 23% (range 4-40%; trend +1.75%/year increase) since 2002-3.
A3. Develop and revise Program offerings in emerging areas of social relevance, faculty specialization, and use of educational technology.	
a. Develop and offer regularly courses that involve critical and creative thinking in the areas of i) science in the context of conceptual development and social change/ science, technology and values, including environmental studies; ii) dialogue and collaboration in personal and organizational change (through Continuing Education courses), and iii) invention (seeded by a National Collegiate Inventors and Innovators Alliance grant).	i) http://www.stv.umb.edu/SICW.html ii) http://www.cct.umb.edu/CTAWcert.html iii) once the grant ended Invention course was discontinued; revived in Spr '10. [Revision: ii) & iii) become "ii) creative thinking at work, including both putting one's creative thinking into practice and changing one's workplace interactions & organization."]
b. Establish foci for promotion of the certificate program, "Science in a Changing World, " and "Creative Thinking at Work," and “Gifted and Talented Education” to be offered in collaboration with Continuing Education and a CCT outreach unit (see E1 below).	http://www.stv.umb.edu/SICW.html http://www.ccde.umb.edu/certificates/cct/ (Gifted & Talented Education focus did not develop) [Revision: Drop "Gifted and Talented Education" in favor of just two foci for certificates that matches the regular and SICW tracks of the Program as a whole.]

c. Review the Program requirements and content of required courses to complement and adjust new directions in CCT offerings.	Began at a one-day retreat in Jan '08.
d. Review and revise the content of courses to keep them up to date with current scholarship and practice.	Began at a one-day retreat in Jan '08. Continuing as individual instructors make time.
e. Make educationally justified and sustainable choices about when and how to integrate computers and other technologies, including online and distance education, into the teaching of CCT courses and requirements for students.	Online courses began as required by CCDE for the partnership with them and have grown in numbers as that partnership has grown. Instructors have been chosen for those sections on the basis of the multi-modal interactions they include in their "online" instruction. Since 2005 a limited number of students have been brought into regular classes from a distance (through skype). Skype is now also used for panels commenting on student presentations. Wikis have been used, first for students undertaking problem-based learning (see guided tour), then for sharing annotated bibliographies (example), and then for personal assignment drop boxes (example) and peer sharing of drafts. The reflective practice portfolios are now assembled on personal wikis before transfer or linkage to the central wikispace for these. Student discussions on listserv or social network ning. Online courses use Blackboard, but pilot off-Blackboard modules given that Blackboard is to be discontinued in 2012. Students are expected to develop a number of computer and research competencies, http://www.cct.umb.edu/competencies.html , before a mid-program check-in.

B. To establish planning parameters that allow CCT faculty to determine the best use of their experience and energies and adjust operations to work within those parameters.

B1. Set or settle parameters for CCT's role in the GCE.	There has been continuing flux and uncertainty in this area. In response, CCT has taken steps that ensure any matriculated students can be seen through to graduation come what may. Most notably, CCT has developed a partnership with CCDE, funding a program assistant (since October '09, an assistant CCT coordinator) at the same time as requiring the Program to offer online courses. [Revised: "Set parameters for CCT's operations that conform to resources available (primarily in CEHD, CCDE, CLA) and institutional guidelines."] *The notes below address this revised objective as much as B1 as stated.*
a. Departmental and College endorsement of CCT's Mission (in relation to the GCE) and plans.	C&I Constitution as revised April 2006 acknowledges its separate graduate programs and their missions, program committees (incl. non-GCE faculty), and elected program coordinators.
b. Level of CCT course offerings	To match the needs of M.A. students and availability of faculty, CCT decided in 2007-8 to schedule state-funded required courses (except capstone) 1 semester in 3 and state-funded electives on a 2-year cycle. Courses offered through CCDE are mostly on an annual basis; students outside CCT make up most registrants in such sections. This resulted in 26 sections in 09-10, consisting of 10 state-funded sections (6 required for regular track; 2 for SICW track, and 2 other electives) and 16 CCDE-funded sections (5 online sections of required courses; 6 online electives; 1 face2face required course; 4 face2face electives) See http://www.cct.umb.edu/courses.html and links to http://www.cct.umb.edu/pastsemesters.html and http://www.cct.umb.edu/futureyears.html
c. Number of full-time lines with primary responsibility to CCT, and replacement when faculty are on leave. (Having two full-time lines is particularly important for CCT's mission and for the full realization of this plan.)	1 full-time tenure-stream line with primary responsibility to CCT. A lecturer line was initiated in fall '04 to cover a sabbatical leave and continued through spring '10, with CCT teaching contribution ranging from 2& 3 in 04-05 to 1&1 in 09-10. This lecturer line has not been continued in 10-11. A recent sabbatical proposal was approved at the department level on the basis that no additional resources were needed. [Revision: after "...plan": ", as is the continuation of the CCDE-funded assistant coordinator position"]

d. Expected student numbers in the CCT Program and courses	CCT annual target for matriculants 15-18. Minimum for graduate courses at UMB is 8 (except capstone courses [incl. CCT694] in GCE are capped at 6). C&I guidelines for research-intensive courses (incl. CCT692 & 693) set cap at 12 and for interaction-intensive seminars (rest of CCT courses), sets cap at 18. Partnership with CCDE requires an average of 12-13 students/section to cover salary and benefits of assistant CCT coordinator (since fall '09).
e. Emphasis on the synthesis option, not the thesis, for the M.A. capstone	Thesis option formally discontinued in 2008. [Revision: "Emphasize synthesis options that allow students to finish during the final synthesis semester, or during the following 12 months."]
f. Cross-college institutional arrangements to recognize the CLA/CSM faculty who work in CCT, secure continuing CLA/CSM contributions, and include those faculty in promotion and other reviews for CCT faculty in GCE	Core CCT faculty in CLA continue their 50% teaching contribution without any formal cross-college arrangement. CSM involvement as advisors in the new SICW track is voluntary.
g. Support for part-time faculty	All courses taught by part-timers run through CCDE and part-timer salary set by contract.
h. Administrative and budgetary support, to facilitate smooth day-to-day running of the Program and outreach to create conduits that bring in new students.	Budgetary support for CCT comes entirely from CCDE funds, including, since 2009, funds for an assistant coordinator. These funds for CCT are, since 2008, kept in a separate account from other CCDE funds to the Department and can be budgeted for CCT needs alone (honoraria for guest speakers in courses, stipends for outside synthesis readers, special events, program publicity, parking passes,..) CCT places minimal (almost zero) demand on C&I staff, budget, and the attention of the Chair, and on college budget for part-timers. Re: recruitment outreach, see E6.
B2. Achieve recognition of CCT's mission and the other planning parameters by other GCE Programs and Departments.	[Revision: "by other units, within and beyond CEHD"]
a. Circulate the CCT Mission statement, with an appendix on the planning parameters once they are set/settled	--- (except planning parameters presented to a sequence of C&I chairs for discussion since 2005, reflecting the CCT core faculty's priorities.
b. Invite GCE leaders and other faculty to briefings or forums on CCT	GCE Dean and C&I Chair regularly invited to CCT Network monthly events. [Revision: "b2. Timely attention to possibilities for additional or joint lines."]
c. Explore possibilities and make the case for institutional support at UMass Boston of CCT's mission outside the GCE.	(None of possibilities outlined in 2003 AQUAD review were pursued.) [Revision: "c2. Timely advocacy for continuation of CLA commitments when core faculty are on leave or retire."]

B3. Institute measures for recruitment, advising, and other administrative tasks (such as preparing for program reviews) that preserve time and attention for instructional needs and scholarship.	Division of labor among CCT core faculty clarified in 2007 (http://www.cct.umb.edu/AdminChecklist.html), which left most tasks fell on the full-time faculty member with primary responsibility to CCT (P. Taylor). To address this issue, a CCT assistant coordinator position was created through an expansion of the partnership with CCDE. This person now being trained to share admin. tasks, especially during winter & summer breaks, and to keep admin. running when P. Taylor is able to take leave. [Revision (in response to advice from Grad. Studies): "B3a. Keep procedures well-documented, transparent, and consistent in case CCT is a dissatisfied student ever takes legal action."]
C. To contribute to increased cross-program collaboration in the GCE.	
	[Revision: "C1. Participate in a. the operations of the Learning, Teaching and Educational Transformation (non-licensure) track of the M.Ed. program; and b. infusing CCT into other MEd programs."] Exhibit related to objective C1a: http://candi.wikispaces.umb.edu/LTETtrack
C2. Establish a forum for cooperation among the mid-career professional development-oriented MA programs, in particular, contributing ideas and referring students to each others' teacher-research and research preparation courses.	Informal connections with Instr. Des., Public Policy, Dis. Resolution, Ed Tech. CCT Coordinator also co-coordinator of LTET M.Ed. track 08-11. Organized discussions that support intellectual development of C&I faculty in '06 & 07-08. Collaboration with new C&I faculty member, Donna DeGennaro, re: offerings for Ed. Tech.
C3. Play a significant role in a strong and distinctive GCE contribution to innovation in undergraduate and graduate math. and science education, a role that combines CCT's emphases on conceptual change in students and understanding science in its social context (see A3ai).	The formation of COSMIC, Boston Science Partnership & GK12 diminished the scope for CCT work (other than C2 above) directly related to training math & sci. educators.
C4. Contribute to the evolution of standard GCE course evaluations and streamlining of procedures for passing on the results in a form that faculty can use to develop their teaching (see A1b).	See A1b. [Revision: Drop "and streamlining of procedures for" because College has established its own systems. Add "...and can inform students' approach to their learning."]

C5. Promote CCT outreach efforts (see E below) through joint publicity and shared sponsorship where appropriate with other GCE centers and projects.	--- Our Lives and Other Worlds CCT Network events have included guest commentators from other colleges
C6. Contribute to the accreditation of the Professional Education Unit (PEU), centered in the GCE.	NCATE re-accreditation put on hold in 2007. Consideration of how to make CCT goals harmonize with goals of the new accreditation effort, even though it was eventually decided to include only programs that are focused on preparing teachers for licensure, i.e., not CCT. The accreditation goals include: continuous improvement through assessment of learning outcomes (see G3) as well as emphasizing Social justice/inclusion (see G4) and Community Engagement (see G5). [Revision: Replace "Contribute to the accreditation of" with "Harmonize CCT goals with those of..."]

D. To contribute to increased collaboration with and contributions to other units within the University

D1. CCT faculty offer two presentations per year on teaching innovation through the Center for Improvement of Teaching and other fora.	Regularly host a session at CIT Conference in January, e.g., http://cct.wikispaces.umb.edu/WritingSupportGroupJan10 Peter Taylor led a semester-long CIT faculty seminar in Spr '10, http://ptaylor.wikispaces.umb.edu/CITseminar10
D2. CCT faculty members take an active role in supporting further development of the undergraduate Program in Science, Technology and Values, the Environmental Studies Program, and the interdisciplinary Honors Program.	CCT coordinator also directs undergraduate Science, Tech. & Values program and hosts the Intercollege faculty Seminar on Humanities & Sciences. CCT contributes to biennial Honors epidemics course (since '05), and Environment, Sci & Society course (in fall '10). Peter Taylor on ESP advisory board 2004-8, co-chair 2006-7
D3. Enlist faculty from within the University to teach CCT courses, advise students, and participate in other Program activities to replace faculty members previously teaching for CCT, but no longer doing so.	Teaching: Denise Patmon (for literature & arts emphasis), Fadia Harik (or Bala Sundaram) (for Science in a Changing World) Advising: Faculty included in list of possible readers for capstone syntheses, http://www.cct.umb.edu/synthadvisors.html Advising for SICW track: http://www.cct.umb.edu/faculty.html#SICW Commentators on CCT Network presentations
D4. CCT faculty members take an active role in new developments in Environmental and Science Education at UMass Boston.	---

D5. Collaborate in the projects and initiatives of other UMB centers and projects.	Cross-program courses: Biology, Special Education, Public Policy, Women's Studies, Honors Workshops for Beacon Leadership Project, Honors Program, UMass Amherst Commonwealth College & Interdisciplinary Seminar in Humanities and Arts
E. To undertake outreach beyond UMB that builds on the professional strengths of the part-time faculty and growing network of graduates, as well as the regular faculty.	
E1. Prepare a prospectus for an outreach unit, detailing the planning premises, mission, integration of previous projects, governance and processes of evaluation and ongoing development, resources and funding plans, and integration with the CCT Program, GCE, Continuing Education/ CCDE, and the University.	CCT network begun January '08 is establishing "vertical" relations (=alums connect w/ current students) to supplement horizontal relations among students. [Revision: "Maintain the CCT Network as an outreach unit, building on its original prospectus, with goals of • organizing, in a sustainable fashion, personal & professional development, community building, and educational-innovation activities beyond the formal CCT program of studies. • supplementing students' education through the involvement of alums. • continuing alums' education by their involvement in the education of students and each other."]
E2. Involve the outreach unit in the foci for the certificate program (see A3b).	---, except outreach events are tied into recruitment (i.e., rewarding activities in their own right are integrated with promotion & recruitment)
E3. Add at least one project or activity under the outreach unit each year that serves communities beyond UMass Boston.	---, except see E5.
E4. Expand the network of CCT graduates involved in the unit each year.	CCT Network begun January '08; see especially Our Lives And Other Worlds and social network "ning" Also Monthly news distributed by email and available on CCT wiki.
E5. Make other contributions to teaching critical thinking about the life and environmental sciences.	New England Workshop on Science and Social Change (2004-present) & Changing Science, Changing Society expo (2010) aim to build recognition in the Boston/New England area for CCT-centered work in SICW area

E6. Undertake one high profile public event per year as well as outreach and community service through other channels.	High profile public events held '04 through '09. [Revision: Drop "one high profile public event as well as..." (Sizeable fraction of CCT annual budget used and almost no yield on recruitment of new students resulted.)] Expo for SICW in '09-10 (organized to put SICW on the map and elicit possible advisory group members -- see G1.)
F. To support CCT faculty and students in research on and publication of their distinctive contributions to the fields of critical and creative thinking.	
F1. Establish a website and wiki of techniques and illustrative cases that CCT faculty members have developed in courses and other forums (see A2f & E5).	http://www.cct.umb.edu/tfcfb-TOC.html, now folded into http://cct.wikispaces.umb.edu/IndexOfPages
F2. Prepare a prospectus for publication of a fieldbook of these techniques and cases.	Taking Yourself Seriously: A Fieldbook of Processes of Research and Engagement, http://cct.wikispaces.umb.edu/TYS3 Thesis option formally discontinued in 2008.
F3. Establish a process to identify students prepared to undertake thesis research, and establish advising relationships to support them in completing their theses.	[Revision: "F3a. Establish a process to identify students whose synthesis research may lead to publications, and establish advising relationships to support them in preparing manuscripts for publication. F3b. Draw attention to pdf versions of syntheses available through CCT website and UMB curriculum library."]
F4. Arrange discussions of the works in progress of individual CCT faculty members and draw wider attention to the resulting publications.	--- (except, for SICW, see http://sicw.wikispaces.umb.edu) [Revision: "Draw wider attention to the works in progress of individual CCT faculty members and to the resulting publications."]
G. To evaluate and continue developing the Program.	
G1. Constitute an advisory group, which would meet twice a year to give advice to both CCT and its outreach unit, help keep CCT faculty abreast of new developments, and monitor the support and resources CCT and the outreach unit provide each other.	--- [Revision: "Constitute a second advisory group for the SICW track (as required for Prof. Science Masters certification)."]

G2. Review and revise this planning document at the first meeting of the Advisory Group and then on an annual basis.	Detailed annual reviews prepared by core faculty from '07-'10 and AQUAD plans adjusted in '07, http://www.cct.umb.edu/aquad03.html. Steps for SICW development (emphasis in CCT; track on its own right)
G3. Arrange facilitated, participatory planning sessions so as to enhance the participation and investment of CCT faculty in the resulting plans.	Monthly meetings of core faculty since 2007, but no special planning sessions. See priorities articulated for core faculty's work. [Revision: "G3b. Such planning sessions and regular faculty meetings apply the following criteria to any proposed new initiatives: a) we are able to do what we've already committed to, which includes serving the students we have and doing so without adding unagreed-on burdens on each other as colleagues; and b) any initiative is based on a plan with clear goals/ objectives that addresses a) and includes a chance to take-stock afterwards to learn from how well we met the goals. G3c. Articulate priorities for core faculty's work in light of operating parameters (see goal B) and subject these to periodical revision or reaffirmation."]
G4. Develop and begin to implement a strategic plan for increasing the social diversity of CCT students and for CCT courses to address the issues of increasing diversity.	No explicit plan developed, but see review of efforts: http://cct.wikispaces.umb.edu/DiversityPlanning [Revision: replace "of increasing diversity" with "that diversity and inequality raise for understanding thinking and reflecting on practice."]
G5. Prepare a plan for establishing CCT as a place to train and support activists, concerned scientists, and other citizens in community-based research.	No explicit plan developed, but incorporated somewhat in description of SICW track and its core course, PPol 749/CrCrTh649.
G6. Use evaluations (see A1a&b) and feedback from lapsed students (see A1d) to revise and improve CCT courses and other operations; ditto for graduates and current students.	Review by core CCT faculty of graduating students' Exit Self-Assessments to define opportunities for "improvement through assessment of learning outcomes" undertaken in Dec. 10 (included as section II.E of Self-Study).
G7. Arrange a survey of CCT graduates each AQUAD cycle to document ways their CCT experience has influenced their career development.	In the surveys, summarized in section IIC of the self-study report, respondents indicate that CCT helped empower them to do what they had wanted to do and, in some cases, had led to huge changes in their lives and self-understandings. Supplemented by "Our Lives & Other Worlds" sessions of the CCT Network.

Exit Self-Assessment

The assessment centers on your Synthesis experience, but allows room for you to review your CCT experience as a whole. A copy will be kept in your CCT file to help document the Program's effect on students. This assessment also serves as stock-taking to inform your future work; and to provide insight for the instructor, advisors, and for other interested parties. (Word version) The assessment, which is adaptable to any project of research and engagement, addresses two sets of goals:

- **My Synthesis Product Shows That...**
- **Developing as a Reflective Practitioner**

Describe for each goal

- a) something that reflects what you have achieved well related to this goal, and
- b) something you have struggled with/ need more help on/ want to work further on.
  (Even though you may have many examples for some items, one is enough. Download the handout from the website so you can prepare your own document.)

I. "My Synthesis Product Shows That..."

(adapted from the "Phases of research and engagement" in the Practicum course because these are also relevant goals for students' work in moving towards the synthesis product)

A. I can convey who I want to influence/affect concerning what (Subject, Audience, Purpose).

B. I know what others have done before, either in the form of writing or action, that informs and connects with my project, and I know what others are doing now.

C. I have teased out my vision, so as to expand my view of issues associated with the

project, expose possible new directions, clarify direction/scope within the larger set of issues, and decide the most important direction.

D. I have identified the premises and propositions that my project depends on, and can state counter-propositions. I have taken stock of the thinking and research I need to do to counter those counter-propositions or to revise my own propositions.

E. I have clear objectives with respect to product, both written and practice, and process, including personal development as a reflective practitioner. I have arranged my work in a sequence (with realistic deadlines) to realize these objectives.

F. I have gained direct information, models, and experience not readily available from other sources.

G. I have clarified the overall progression or argument underlying my research and the written reports.

H. My writing and other products Grab the attention of the readers/audience, Orient them, move them along in Steps, so they appreciate the Position I've led them to.

I. I have facilitated new avenues of classroom, workplace, and public participation.

J. To feed into my future learning and other work, I have taken stock of what has been working well and what needs changing.

II. Developing as a Reflective Practitioner, Including Taking Initiatives in and Through Relationships

1. I have integrated knowledge and perspectives from CCT and other courses into my own inquiry and engagement in social and/or educational change.

2. I have also integrated into my own inquiry and engagement the processes, experiences, and struggles of previous courses.

3. I have developed efficient ways to organize my time, research materials, computer access, bibliographies, etc.

4. I have experimented with new tools and experiences, even if not every one became part of my toolkit as a learner, teacher/facilitator of others, and reflective practitioner.

5. I have paid attention to the emotional dimensions of undertaking my own project but have found ways to clear away distractions from other sources (present & past) and not get blocked, turning apparent obstacles into opportunities to move into unfamiliar or uncomfortable territory.

6. I have developed peer and other horizontal relationships. I have sought support and advice from peers, and have given support and advice to them when asked for.

7. I have taken the lead, not dragged my feet, in dialogue with my advisor and other readers. I didn't wait for the them to tell me how to solve an expository problem, what must be read and covered in a literature review, or what was meant by some comment I didn't understand. I didn't put off giving my writing to my advisor and other readers or avoid talking to them because I thought that they didn't see things the

same way as I do.

8. I have revised seriously, which involved responding to the comments of others. I came to see this not as bowing down to the views of others, but taking them in and working them into my own reflective inquiry until I could convey more powerfully to others what I'm about (which may have changed as a result of the reflective inquiry).

9. I have inquired and negotiated about formal standards, but gone on to develop and internalize my own criteria for doing work--criteria other than jumping through hoops set by the professor so I get a good grade.

10. I have approached the CCT synthesis course and the CCT program as works-in-progress, which means that, instead of harboring criticisms to submit after the fact, I have found opportunities to affirm what is working well and to suggest directions for further development.

ExitSelfAssessment

Exit Self-Assessments

If the link does not allow you to view the page, it is because the student has not given permission for their self-assessment to be public.
If the page is simply the template, the self-assessment is not (yet) available in electronic form. Some links will open up a new window with a PDF file, since some assessments were scanned from paper copies rather than stored digitally.

Self-Assessment Template with Instructions

2003-2010
Barrett, Julie C.
Barton, Joelle
Billingsley, Shelly
Blackler, Robert
Brenner, Andrea
Bretsch, Jeffrey
Cartledge, Michael
Capezio, Kristin
Carvino, Frank
Chen, Pin-Yu
Clements, James E.
Coe, Jan
Conlin, Nicholas
Craig, Jeffrey
Crounse, Karen
de la Garza, Virginia
DiTullio, Barbara
Dobbs, Paul
Fesseha, Senait
Fish (Oppenheim), Dory
Forgues, Jennifer
Frances, Ivy
Frangie, Mary
Frias, David
Fries, Bertha Lucia
Garcia, ElizaBeth
Goddess, Scott
Grainda, Abigail
Hammond, Jeanne
Hanks, Kristen
Hardy, Michelle
Hatano, Maho
Heath, Gretchen

Herosy, Joe
Hicks, Gloria
Hinkell, Alyssa
Huscher Cohen, Barbara A.
Irwin, Kit (Kathleen)
Jain, Marnie A.
Jans, Matthew
Jeffrey, Linda
Johnson, Kevin
Kenefick, Jane
King, Crystal
LaChance, Jane
Leavitt , Kathleen
Lee, Beck Hing
Levey-Pabst, Marie
Lewis, John
Lihon, Michael
Lindholm, Kyle
Lingley, Robert
McNiff, Meghann
Milbourn, Tonya Lynn
Moniz, Mary
Morgan, Michelle K.
Moynihan, Melissa
Mucci, Jeneen M.
Nakashima, Tamami
Naylor, Elizabeth H.
Norris, Robert
Okafor, Benjamin
Perrault, Amy
Puma, Matt
Quirk, John
Rancatore, Laura
Rauscher, Charly (Charles)
Rene, Jean
Reyes, Andres Ray
Rucker, April
Rushworth, Kristen
Savage , Sheryl
Scheufele, Maryann
Sheehan, Nancy
Smith, Ashley
Straghan, Heidi
Sweet, (Willard) Davis
Szteiter, Jeremy
Tetzlaff, Tara
Thua, Doan Van

Todd, Jennifer
Tower, Matthew
Valdez, Luz
Walsh, Kathleen
Wang, Zhenxing
Wentzel (Sponseller), Brooke
Witkowski, Luanne E.
Yangco, Roanna
Yongstar, Srijula

Practitioner's Portfolio: Courses

Peter J. Taylor
Program in Critical & Creative Thinking
Graduate College of Education
University of Massachusetts, Boston

(Return to full 2005 portfolio or view previous reviews of courses and teaching from 2001, 1999, 1995)

For each course taught at UMB since 1998 I include a review of:

- the original objectives for the course (which should be read together with the description and goals stated in the syllabi);
- challenges encountered and my responses; and
- future plans.

Each review is followed by:

- the syllabi;
- summaries of the GCOE evaluations;
- summaries from the written course evaluations I designed; and/or
- the originals of those evaluations [not available in online version].

1. CCT670 Thinking, Learning and Computers
2. CCT692Processes of Research and Engagement (previously 698: Practicum)
3. CCT601Critical Thinking (with A. Millman)
4. CCT611Science in Society [Seminar in Critical Thinking]
5. CCT693Action Research for Educational, Professional, and Personal Change (Previously: Seminar in Evaluation of Educational Change)
6. CCT694Synthesis Seminar
7. CCT640Environment, Science &Society [C&CT in Sci. &Tech.]
8. Ed 610 Computers, Technology, and Education

Additional special topics courses I organized and taught in:

9. CCT697New Directions in Science Education
10. CCT697Critical and Creative Thinking in Practice
11. CCT697Critical and Creative Thinking in the Workplace

New courses since Fall 2001:

12. CCT611Making Sense of Numbers [Seminar in Critical Thinking]
13. PolSci260Politics and the Environment
14. PPOL 749Scientific and Political Change (Previously: Science, Technology and Public Policy)
15. PPOL 753(Nursng 753) Epidemiological Thinking and Population Health (Previously: PPOL/Geron/Nursng/HighEd 797)
16. WoSt 597Gender, Race, and the Complexities of Science and Technology

Critical and Creative Thinking Course Offerings, Descriptions, Syllabi, Evaluations, and Texts

(With links to latest syllabi. Info about required texts is at the end of the description or in the syllabi.)

Scheduled course offerings

Fall 2010 | Winter/Spring 2011 | Summer 2011 | Fall 2011 |
Past years' courses
Future years' courses (provisional)
Course planner
Guide for non-matriculated students

Foundation Courses (regular program)
(All required for M.A.; 601 & 602 required for certificate)

(Offered face2face 1 in every 3 regular fall & spring semesters)

CrCrTh 601 Critical Thinking (also often in the summer; fall on-line)
CrCrTh 602 Creative Thinking (also spring on-line)
PHIL 501 Foundations Of Philosophical Thought
PSYCH 550/CrCrTh 651 Advanced Cognitive Psychology

Foundation Courses (Science in a Changing World track)
(All required for M.A.; two required for certificate)

(Offered face2face 1 in every 2 years)

CrCrTh640 Environment, Science and Society: Critical Thinking **OR**
CrCrTh645L Biology in Society: Critical Thinking
CrCrTh649L Scientific and Political Change
CrCrTh650 Mathematical Thinking
CrCrTh652 Children And Science

Elective Courses
(4 required for M.A.; 3 for certificate)

(Science in a Changing World students may take the regular core courses as electives.)
(* indicates offered 1 in every 2 years; online sections offered every year; otherwise offered irregularly)

CrCrTh611 Seminar In Critical Thinking (theme: Problem-based learning *)
CrCrTh612 Seminar In Creativity (* and summer online)
CrCrTh615 Holistic and integrative education
CrCrTh616 Dialogue Processes (each winter; spring on-line)
CrCrTh618 Creative Thinking, Collaboration and Organizational Change (each summer; fall on-line; spring on-line)
CrCrTh619 Biomedical ethics *
CrCrTh620 Moral Education
CrCrTh627 Issues In Antiracist And Multicultural Education *
CrCrTh630 Creativity And Criticism In Literature And Art *
CrCrTh640 Environment, Science and Society: Critical Thinking
CrCrTh645L Biology in Society: Critical Thinking *
CrCrTh646L The Gifted and Talented Student
CrCrTh649L Scientific and Political Change *
CrCrTh650 Mathematical Thinking *
CrCrTh652 Children And Science *
CrCrTh655 Metacognition *
CrCrTh670 Thinking, Learning and Computers
(fall on-line)
CrCrTh688 Reflective Practice (1-3 credits) (fall & spring)
Special Topics Courses offered in past years
Courses from other programs

Required Final Courses for M.A.

CrCrTh 692 Processes of Research and Engagement (formerly 698, Practicum) (Offered face2face & online [subject to enrollment] 1 in every 3 regular fall & spring semesters)
CrCrTh 693 Action Research for Educational, Professional and Personal Change (formerly Evaluation Of Educational Change) (Offered face2face & online [subject to enrollment] 1 in every 3 regular fall & spring semesters)
CrCrTh 694 Synthesis Of Theory And Practice (fall & spring [subject to enrollment])

Descriptions

Required Foundation Courses (regular program)

CrCrTh 601 **Critical Thinking**

This course explores issues about the nature and techniques of critical thought, viewed as a way to establish a reliable basis for our claims, beliefs, and attitudes about the world. We explore multiple perspectives, placing established facts, theories, and practices in tension with alternatives to see how things could be otherwise. Views about observation and interpretation, reasoning and inference, valuing and judging, and the production of knowledge in its social context are considered. Special attention is given to translating what is learned into strategies, materials, and interventions for use in students' own educational and professional settings.
Key Text: Costa, Developing Minds, Tishman, et al., The Thinking Classroom: Learning and Teaching in a Culture of Thinking, 1995
2009 fall on-line syllabus
2009 summer 3-week syllabus
2010 summer 3-week syllabus
2010 evaluations, summer
1999 syllabus
online section; Schoenberg

Tagline: Applying critical thinking skills in one's professional life. This section provides critical thinking skills that can be applied to various professions, such as education, business, nursing and many other Occupations (Video Introduction)

CrCrTh 602 **Creative Thinking**

This course explores approaches to "How might we proceed when confronted by problems, situations too ambiguous, complex, or messy or impossible to be addressed directly through logical strategies?" It seeks to increase the participants' understanding of creativity, to improve their creative problem-solving skills and to enhance their ability to promote these skills in others, in a variety of educational settings. Students participate in activities designed to help develop their own creativity, and discuss the creative process from various theoretical perspectives. Readings are on such topics as creative individuals, environments that tend to enhance creative functioning, and related educational issues. Discussions with artists, scientists and others particularly involved in the creative process focus on their techniques, and on ways in which creativity can be nurtured.
Key texts: Sherkejian, Uncommon Genius, Cameron, The Artist's Way
2008 syllabus, Greenwald
2008 online syllabus, Gallo , Witkowski
2010 online evaluations

PHIL 501 **Foundations of Philosophical Thought**

By discussing four or five substantive problems in philosophy -- morality, the nature of knowledge, freedom of the will, the nature of mind, and social organization -- we will attempt to derive a common approach that philosophers bring to these problems when developing their own solutions to questions such as, "How do we know what we know?" or when criticizing the solutions of other philosophers. In the course of this discussion we will consider some of the ways that substantive issues and debates in philosophy relate to contemporary non-philosophical issues in

our society and can be introduced into a broad range of educational environments outside standard philosophy courses. In connection with the latter, we will examine curriculum materials and discuss questions about the ability of children and adolescents to think philosophically.
Key texts: Bowie, et al., Twenty Questions: An Introduction to Philosophy, Matthews, The Philosophy of Childhood
2008 syllabus , Millman

CCT651/PSYCH 550 **Advanced Cognitive Psychology**

This course offers the most up-to-date knowledge on perception, memory, imagery, and problem solving to enhance one's approach to problem-solving. It provides a survey of the field of cognitive psychology from an information-processing viewpoint. This course will consider how people encode, organize, transform and output information. Emphasis will be placed on such topics as concept formulation, problem solving, and creative thinking.
Required text: Reisberg, Cognition: Exploring the Science of the Mind, 4th edition, Worth Publishers. (ISBN 978-0-393-19851-5)
2010 syllabus, Smith

Students who choose the Science in a Changing World track take alternative foundation courses: CrCrTh640 Environment, Science and Society: Critical Thinking **OR** CrCrTh645L Biology in Society: Critical Thinking; CrCrTh649L Scientific and Political Change; CrCrTh650 Mathematical Thinking; CrCrTh652 Children And Science

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Elective/Specialty area/theme Courses

Following or in conjunction with the required foundation courses, you choose three electives and can tailor your learning to your specific needs. We recommend that you identify a focused area of interest to facilitate development of in-depth knowledge and practice. From this study should emerge a question to pursue through the last three required courses.

The elective courses allow students to define specific areas in which they

explore their CCT-related interests -- for example, "creative thinking at work", "science in a changing world", "gifted and talented education", "critical and creative thinking in literature/arts/music", "dialogue and collaboration in organizational change." Areas of specialization may be constructed through cooperation with other UMass-Boston graduate programs, such as Instructional Design, Special Education, Public Policy, and Dispute Resolution.

With prior permission of the Faculty Advisor, courses offered by other Graduate Programs or up to two upper level undergraduate courses may be taken where appropriate as electives within a specialty area.

CrCrTh 611 **Seminar In Critical Thinking**(3 Credits)
Topic changes from year to year. Recent topics include:

Making Sense of Numbers

Current Theme: Authentic Problem Solving Using Inquiry-Based Approaches

The best way to understand the process of problem solving is to engage in it - most especially, to experience the thought, habits of mind, and actions associated with using inquiry-based approaches to tackle sticky problems in different domains.
Problem-based learning (PBL) is a powerful vehicle for conducting inquiry that simultaneously develops problem solving strategies and disciplinary knowledge bases and skills by placing individuals in the active role of problem solvers confronted with an ill-structured real world problem of their choosing. This robust, collaborative CrCrTh process is shaped and directed by students with the instructor as metacognitive coach. Students, not instructors, take primary responsibility for what is learned and how. Instructors are "guides on the side" or metacognitive coaches, raising questions that challenge students' thinking and help shape self-directed learning so that the search for meaning and understanding becomes a personal construction of the learner.
In this "thinking action" course that can be applied as an elective in

all concentrations, students will use a PBL model that has been field-tested and published by the instructor to investigate interest-based "murky" problems. Corroborating strategies for inquiry and problem solving will also be incorporated into students' thinking toolboxes. Required texts: Science in Progress, distributed by the instructor Woods, Donald. Problem-Based Learning: How to Gain the Most from PBL, The Bookstore, McMaster University, Hamilton, ON. ISBN 0-9698725-0-X
2009 syllabus, Greenwald

CrCrTh 612 **Seminar In Creativity**
This course delves deeply into the theory and practice of promoting creativity, using a specific theme, such as invention and innovation, humor, realizing creative aspirations, building creative communities, as a focus for the readings, discussions, class activities, and semester-long student projects. The course materials, which are drawn from a variety of sources to match the instructor's speciality, student interests, and evolving trends in the literature, include biographies, intellectual histories, psychological studies, educational research, the popular media, guest speakers, and outside mentors. Details for the specific semester are publicized in advance by the Program.

- Theme for Fall '09: Ideas, Action, Context

  New ideas come not simply from individual inspiration, but from borrowing and connecting. The more things in your tool box the more likely you are to make a new connection and see how things could be otherwise, that is, to be creative. Yet, in order to build up a set of tools that works for you, it is necessary to experiment, take risks, and reflect on the outcomes. Such reflective practice is like a journey into unfamiliar or unknown areas-it involves risk, opens up questions, creates more experiences than can be integrated at first sight, requires support, and yields personal change. In short, ideas are related to action and take place in a context (of support and reception). Through the course activities, we will compile a state of art tool box for creative endeavors.

- Theme for Fall '08: Humor.

  Welcome to what should be a required course in every college and university! In the process of exercising our capacity for humor, we'll delve into how it works and why it's one of our greatest survival tools. In this extremely engaging seminar students decide what's interesting to find out about humor, enlighten us with what they find out and, finally, demonstrate how they would apply this to their lives. For the first several weeks the instructor leads an exploration of some basic tenets for understanding humor such as the nature of humor, its origins, theoretical bases and its relationship to creativity, among some ideas for consideration. Then students take the lead and, based on specific interests, work in pairs to present perspectives on humor and also individually to explore a related and/ or different domain of humor. The aha /ha ha relationship is front and center in this dynamic, fun course of study!
  2008 syllabus

- Invention and Innovation theme for Spring '02-'04 and Spring '10 2010 syllabus, Greenwald
- Summer online section; Clark (Video Introduction)

  Tagline: "Inside the Creative Process: Exploring Blocks and Finding Creative Ground"
  The creative process is a journey through your inner world, where sights along the way are channeled into a product and eventually are shared with the outer world. Because it is a process that relies on self-perceptions, self-truths, beliefs and values, it implies that a system be in place in order to acquire, express and ultimately share this self-knowledge. The personal nature of this process can give rise to creative works, yet at the same time, it can become the weight that causes a fracture in the process. This course will examine the tensions that exist while creating and the blocks they can give rise to. Throughout the course, students will gain a clearer understanding of the creative individual and his/her creative process. The course will look at some of the commonalities, both good and

bad, that occur for creative artists and explore ways to maintain a healthy approach in your own creative process. Through the use of reflective practice, students will learn to identify obstacles to their creativity as well as learn a number of tools to work through such blocks. Students will experiment with the skills that lead to meaningful creative works and employ these skills in their daily living and creative life. Understanding and supporting the link to your inner world will enhance your ability to nurture your own creative spark and strengthen your ability to sustain your creative work. By establishing a deeper awareness of the self and incorporating this into your creative endeavors, you might more readily fan the spark that helps kindle your creativity.
2010 syllabus

CrCrTh 615 **Holistic and Integrative Teaching**
This course explores approaches which tap both teachers' and students' potential for learning, thinking, and creativity. Its primary focus is on integrative, holistic strategies to engage students creatively in literature, writing and the arts. Participants are actively involved in preparing practical applications and demonstrations of concepts emerging from the class.

CrCrTh 616 **Dialogue Processes**
Genuine dialogue provides a creative social space in which entirely new ways of thinking, learning, and relating to others may emerge. Dialogue involves a shared process of collective inquiry where people work together to understand the assumptions underlying their individual and collective views that limit their thinking and responses to the world. Course participants learn and experience approaches to dialogue inspired by Bohm, Isaacs, Scharmer, Weissglass and others in the interest of bringing about significant educational, organizational, social, and personal change.
Key Text(s): Isaacs, Dialogue
Note: The face2face and online sections described below differ considerably in style and emphasis. Do not take the syllabus for one as an indication of what the other would be like.
Winter section; Bradford

Tagline: The Dialogue Process in the tradition of Bohm and Isaacs.
Mastering the Dialogue process requires learning a variety of communication skills including a tolerance of paradox (or opposing views), the suspension of judgment and empathic listening. It also requires making the entire thought process visible, including tacit assumptions. In this process, instead of imposing our views on others, we invite others to add new dimensions to what we are thinking. We also learn to listen to the voice of the heart-our own and others--and strive to find ways to make that voice articulate.
2009 syllabus

online section; Gunnlaugson

Tagline: Exploring the Transformative Practices of Dialogue in Learning Communities & Organizations
Structured as an online learning community, the core objective of this course is to cultivate theoretical and practical knowledge of generative dialogue. Building from Bohm and Isaacs' conception of dialogue, this course will focus on Scharmer's subsequent work on generative dialogue and presencing. The course offers a range of dynamic learning spaces designed to develop our individual and collective capacities for bringing significant changes in how we think, communicate and learn together. In addition to theoretical inquiry, there are skill and capacity building exercises, coaching triads, collaborative assignments, and a real-world component where participants conduct a dialogue-based project within their own organization or community. The course will be delivered through multiple mediums including web-based audio and video files, WebCT, conference calls, phone coaching, and other possibilities that draw on students' insights, wisdom and novel ideas.
2010 syllabus (Video Introduction)

CrCrTh 618 **Creative Thinking, Collaboration and Organizational Change**

Through interactive, experiential sessions and structured assignments students learn critical and creative approaches to working in organizations. Skills addressed include: communication and team-building; facilitation of participation and collaboration in groups; promotion of learning from a diversity of perspectives; problem-finding and solving; and reflective practice. Students apply these skills to situations that arise in business, schools, social change groups, and other organizations with a view to taking initiative and generating constructive change.
Note: The face2face and online sections described below differ considerably in style and emphasis. Do not take the syllabus for one as an indication of what the others would be like.
Summer face-to-face section; Turpin/Gray, Bradford, Yanow

> Consists of three two-day workshops:Diversity Awareness, Effective Teambuilding, Facilitating Participatory Planning and Design
> No required text for face2face summer section.
> 2010 syllabus

online section; Bradford; next offered spring '11

> Tag line: Build a sense of trust, teamwork and accomplishment as class members work together on a variety of creative endeavors in virtual space.
> online syllabus (Bradford 2009)

online section; Clausen; next offered fall '10

> Tagline: Theories and Tools for Creative Change in Organizations, Communities and the World (Video Introduction)
> This course explores alternative ways of finding and leveraging emergent opportunities for change. Drawing on both traditional approaches and innovations from science concerning complexity and evolution/ecology, we look at the whole systems within which communities, organizations, teams and individuals create ideas, processes and products. We experiment collaboratively as a class on a set of challenges that face all of us, while individuals

concurrently pursue personally relevant workplace or community projects.
online syllabus (Clausen 2009)
2010 evaluations (Clausen)
Texts for 2010: How to Make Collaboration Work by D. Straus and T. Layton, Berrett-Koehler Pub, 2002
Heart of Change Field Guide by D. Cohen, Harvard Business School Press, 2005
Here Comes Everybody by C. Shirky, The Penguin Press, 2008
The Practice of Adaptive Leadership by R. Heifetz, A. Grashow & M. Linsky, Harvard Business School Press, 2009

CrCrTh 619 **Biomedical Ethics**
This course develops students' critical thinking about dilemmas in medicine and health care policy, such as those that arise around allocation of scarce resources, criteria for organ transplants, informed consent, experimentation on human subjects, AIDS research, embryo research and selective termination of pregnancy, euthanasia, and physician-assisted suicide. Through such cases the course introduces methods in moral reasoning, rights-based reasoning, decision-making under uncertainty, and utilitarianism in classic and contemporary normative reasoning.
2010 syllabus (online), Robinson
2010 evaluations (Robinson)

CrCrTh 620 **Moral Education**
A comprehensive analysis of the basic issues in moral education from an interdisciplinary perspective. Philosophical studies of the nature of morality and the moral life will be integrated with psychological studies of moral development and human motivation and brought to bear on issues in teaching morality. Topics covered will include: rationality, emotion, and the moral development of children; moral education. indoctrination; socialization, the "hidden curriculum," and moral education. Throughout this course theoretical insights will be applied to an examination of materials, programs, and practices in moral education, both in schools and the wider community.
2002 syllabus

CrCrTh 627 **Issues In Antiracist And Multicultural Education**
The course deals with complex and emotionally-charged issues of culture, religion, sexual orientation, and, especially, race, both in society generally and specifically in education. How do we teach against racism, homophobia, cultural and religious parochialism, while being respectful of the many points of view represented in most classrooms? The readings present these issues as many-sided, and the instructor strives to make the classroom a safe and respectful space to voice one_s opinions and learn from others. This is not a _how to_ course but rather helps people in various fields, including teaching, think and reflect on issues they will face with students, colleagues, and clients. The course is open, with permission of instructor, to one or two advanced undergraduates who are interested in going into the field of education. (Contact instructor if you think you fall into this category.) The course will explore two related forms of education -- (a) antiracist education, (b) multicultural education -- approaching them as issues in moral and value education and exploring controversies in the theories and practices of antiracist and multicultural education. Some specific topics include: race and school achievement; ethnic identity and self-esteem; racial and ethnic stereotypes; Afrocentrism; religious pluralism; multiculturalism -- a unifying or divisive force?; antiracist and multicultural curricular approaches. Also, some attention will be paid to sexual orientation controversies.
2010 syllabus, Blum
Readings for 2010: Arthur Schlesinger, Jr., The Disuniting of America: Reflections on a Multicultural Society, revised and enlarged edition (Norton, 1998)
Theresa Perry, Claude Steele, and Asa Hilliard III, Young, Gifted, and Black: Promoting High Achievement Among African-American Students (Beacon, 2003)
Lawrence Levine, The Opening of the American Mind: Canons, Culture, and History (Beacon, 1996)
Vivian Gussin Paley, Kwanzaa and Me: A Teacher's Story (Harvard, 1995)
Also, readings on religious pluralism and Islam, bilingualism and linguistic minorities.

CrCrTh 630 **Creativity and Criticism In Literature and Art**

Expression and evaluation, freedom and discipline, creative production and the critical response to it -- how do these dualities relate to visual and verbal imagination as they are demonstrated in literature and the arts? Specific strategies for eliciting imaginative work in these areas will be demonstrated, as will specific strategies for evaluating imaginative works. Finally, this course will focus on ways to help others (including children) develop critical and creative skills and on ways to effectively use strategies for eliciting and evaluating imaginative work.
(Check with the instructor to ascertain the particular emphasis of the course for the semester you plan to take this course.)
Theme Fall '09 and '11: Multicultural literature for children & adolescents
2009 syllabus, Patmon
Theme Spring '11: How the ARTS (visual, performing, film-making, dance, theatre, etc.) are taught through CRITICAL and CREATIVE THINKING, and how thinking is enhanced through the ARTS.
2011 syllabus, Greenwald
2007 syllabus, Schwendener

CrCrTh 640 **Environment, Science and Society: Critical Thinking**
Current and historical cases are used to examine the diverse influences that shape environmental science and politics. This exploration, in turn, leads to new questions and alternative approaches for educators, environmental professionals, and concerned citizens.
2010 syllabus, Taylor
Texts for 2010: Taylor, P., Unruly Complexity, U. Chicago Press, 2005

CrCrTh 645 **Biology in Society: Critical Thinking**
Current and historical cases are used to examine the political, ethical, and other social dimensions of the life sciences. Close examination of developments in the life sciences can lead to questions about the social influences shaping scientists' work or its application. This, in turn, can lead to new questions and alternative approaches for educators, biologists, health professionals, and concerned citizens.
No required text - all readings by download from password-protected site
Spring 2003 syllabusTaylor.

CrCrTh646L **The Gifted and Talented Student**

Gifted and talented students are one of our most underserved populations of learners.This state-of-the-art course is designed for teachers, and others (curriculum coordinators, administrators, parents) responsible for meeting the special needs of high potential learners in the regular and/or special classroom and at home. A broad spectrum of contemporary views on definition, identification, and characteristics of high potential learners are explored through lively critical and creative thinking activities and discussion. Included is examination of further individual differences such as ethnicity, gender, misdiagnoses and dual diagnoses, underachievement and learning disabilities.
Creation of learning environments and curriculum and instructional strategies that motivate and challenge high potential learners of any developmental age is also a major focus. This includes problem and inquiry-based learning, creative problem solving, invention, and humor and thinking which are specializations of the instructor. The course culminates with a unique opportunity for participants to practice what they learn with small groups of gifted students who join us in class for this purpose!
Taught by Nina Greenwald,Ph.D. Specialist in Gifted Education: teacher trainer; workshop leader; keynote presenter; published author; co-founder of MAGE (Massachusetts Association for Gifted Students).
2009 syllabus

CrCrTh 649L **Scientific and Political Change** (formerly: Science, Technology and Public Policy)
Although relatively few Americans have backgrounds in science or engineering, they are increasingly confronted with issues that are technically complex. This course explores the resulting tensions and asks how the needs for scientific expertise and democratic control of science and technology are reconciled. The first half of the course traces the historical development of American science policy and situates this development comparatively. The second half focuses on contemporary controversies, including those over the nature of university-industry relations, patent policy, and the cases of expert/lay disagreements over risk.

* Students outside UMass Boston can be brought into this course from a distance (requiring only a broadband internet connection).

* An innovative case-based learning approach in this course allows students to shape individualized directions of inquiry and develop their skills as investigators and prospective teachers.

Required texts: Dickson, D. (1984). The New Politics of Science. New York, Pantheon, reprinted University of Chicago Press, 1988.
Hackett, E., O. Amsterdamska, et al., Eds. (2008). The Handbook of Science and Technology Studies. Cambridge, MA, MIT Press.
2010 syllabus, Taylor.
2010 evaluations

CrCrTh 650 **Mathematical Thinking**
This course explores several types of mathematical thinking in the context of number theory, algebra, geometry, and introductory calculus, and relates them to critical and creative thinking skills. Developmental and experiential factors in learning and teaching mathematics are considered, as well as techniques for determining a learner's mathematical abilities and learning styles. Readings, discussion, research, and problem-solving are used to provide a historical context, and to suggest connections with other disciplines. Individual and small-group projects are adapted to student interests. No formal mathematical background beyond high school algebra and geometry is required.
Syllabus from 1999

CrCrTh 652 **Children And Science**
This course explores the ways children think about their natural and social world and how this affects their learning of science. We will be particularly concerned with identifying and describing the organized conceptual frameworks children have prior to instruction (which typically are different from the scientists' conceptualizations) and with understanding the general processes by which conceptual frameworks can be changed. One important question concerns in what ways children are fundamentally different learners and thinkers than adults and in what ways they are fundamentally similar. Key text: Osborne & Freyberg, Learning in Science
2005 syllabus, Smith

CRCRTH 655 **Metacognition**

This course considers various aspects of metacognition and how they influence behavior in children and adults. Topics include the individual's knowledge of his or her own cognition, self-awareness, the monitoring of conscious thought processes, inferences about unconscious thought processes, metacognition as a decision process, metacognitive strategies, the development of metacognition, and metacognition as a source of individual differences in children.
2009 syllabus, Martin

CrCrTh 670 **Thinking, Learning and Computers**
This course considers the consequences of using computers to aid our thinking, learning, communication and action in classrooms, organizations, and social interactions. Class activities acquaint students with specific computer-based tools, the ideas and research behind them, and themes for critical thinking about these ideas and tools.
See also related computers in education syllabus

Fall online section of CrCrTh670; Szteiter

Tagline: Critical Thinking and Information Literacy (Video Introduction)
We will focus on the idea of information literacy in particular, as we seek to understand the growing complexity that is taking place in the way that computers and digital technology influence, and are influenced by, thinking and learning. This includes the need to use critical thinking skills to make sense of the enormous amount of information that becomes accessible through computers, as well as the way that various formats of information and computer-based resources might support thinking and learning. We consider computers in contexts such as collaborative thinking, applications of to education and other fields, and understanding ourselves in a digital culture.
2010 syllabus 2009 evaluations

CrCrTh 688 **Reflective Practice**
Reflective practitioners in any profession pilot new practices, take stock of

outcomes and reflect on possible directions, and make plans to revise their practice accordingly. They also make connections with colleagues who model new practices and support the experimenting and practice of others. Students in this course gain experiences and up-to-date tools for reflective practice through presentations, interactive and experiential sessions, and, optionally, supervised pilot activities in schools, workplaces, and communities.
2009 syllabus
2009 evaluations

CrCrTh 696 **Independent Study** (1-3 Credits)
The comprehensive study of a particular topic or area of literature determined by the student's need; the study is pursued under the guidance, and subject to the examination, of the instructor. An application or outline of study should be agreed by the instructor and program director before you register.

Electives may be chosen from other programs.

Related to specialty in Literature and Arts
EDC G 647, Multicultural Literature for Children and Young Adults
ENGL 611, The Teaching of Literature
ENGL 623, The Nature of Narrative
ENGL 660, Multi-ethnic literature in the United States
EDC G 647 and ENGL 611, 623, 660 have been recommended for CCT students, but a number of courses from the English Department graduate program would be suitable for CCT students specializing in Literature and Arts. Visit the English Department, 6th. floor, Wheatley for listings of courses offered in upcoming semesters, which include special one-time offerings not listed in the Graduate Catalog. Consult with the instructor to check whether the course is suitable for and open to you.
Related to Science in a Changing World
Non-CCT electives taught by a CCT instructor
PPol 753L/ Nursing 753L Epidemiological Thinking &

Population Health
syllabus, Taylor

WoSt 597 Gender, Race, and the Complexities of Science and Technology, Taylor

Explore the wiki to see that "students from all fields and levels of preparation are encouraged to join." Because it is open to graduates students beyond UMass, you have to apply (http://web.mit.edu/gcws/apply/index.html) and then register for WoSt597, section 1

Required Final Courses

The last three required courses -- two precapstone courses, Action Research for Educational, Professional, and Personal Change, and Processes of Research and Engagement, together with the capstone Synthesis Seminar -- are designed to facilitate your development as reflective practitioners in some focused area of interest, with a special emphasis on an engagement or change in education that promotes critical and creative thinking. Refer to options and rationale for pre-capstone and capstone courses.

CrCrTh 692 **Processes of Research and Engagement** (previously CCT698, Practicum)
In this course students identify issues in educational or other professional settings on which to focus their critical and creative thinking skills. Each student works through the different stages of research and action-from defining a manageable project to communicating findings and plans for further work. Supervision is provided when the student's research centers on new teaching practices, workshops in the community, or other kinds of engagement as an intern or volunteer. The classes run as workshops, in which students are introduced to and then practice using tools for research, writing, communicating, and supporting the work of others. (Compared with CrCrTh 693, this course allows more exploration of your own direction and questions, especially through dialogue around written

work and class presentations.)
Required Text: Elbow, Writing with Power (any edition)
2010 syllabus, Taylor

(2010 online syllabus, , Szteiter
Video Introduction)
2010 evaluations, 2010 CCT evaluations (face2face, Taylor), 2010 evaluations (online, Szteiter)

CrCrTh 693 **Action Research for Educational, Professional, and Personal Change** (previously Evaluation of Educational Change)
This course covers techniques for and critical thinking about the evaluation of changes in educational practices and policies in schools, organizations, and informal contexts. Topics include quantitative and qualitative methods for design and analysis, participatory design of practices and policies in a framework of action research, institutional learning, the wider reception or discounting of evaluations, and selected case studies, including those arising from semester-long student projects.
"Evaluation" does not mean assessment of students' work, but systematic evaluation of the effect of changes in educational practices and policies in schools, organizations, and informal contexts. The course uses the discipline of evaluation as part of the practice of action research. The larger issues facing a practitioner as change-agent, over and above the evaluations, cannot help but enter class discussions and your projects. Unless the educational or professional engagement/change you're concerned about has already been instituted, you will spend time designing it in conjunction with designing how you will evaluate it.
Required Texts: Calhoun, Action Research in the Self-Renewing School, Schmuck, Practical Action Research for Change (any edition)
syllabus, face2face section, Taylor
syllabus, online section, Szteiter
(Video Introduction)

CrCrTh 694 **Synthesis Seminar** (offered whenever we can get sections of six students)
The synthesis seminar is a structure within which to meet deadlines and

get assistance in completing the written product of the synthesis project or thesis. There are many specific options for syntheses, from the development of a traditional theoretical paper, to a curriculum or professional development series, to writing a business plan, to the creation of a Web Page.
No required texts
Spring 2011 syllabus

Return to home | handbook | search
Last update 7 January 2011

Abstracts for Theses and Syntheses

from the Graduate Program in Critical and Creative Thinking at the University of Massachusetts Boston

Before 1998, theses were deposited in the Healey Library.
From 2003 onwards, full texts of the syn/theses are linked to many of the abstracts.
Apologies for incomplete info. Email notice of glitches to cct@umb.edu

1. To search for a general term in the abstracts, (abstract) use the searchbox for the whole CCT website

(abstract) (abstract) Search keyword: Go

2. If you know the student's last name, say, Dewey, change the end of the URL above from abstracts-TOC.html to abstracts.html#Dewey

3. To browse titles (linked to abstracts)by primary subject, select from the list to follow:

.ART Artistic, film, musical, and theatrical production
.COM Communication & Dialog
.COR Corporate and workplace
.CTY Community Settings
.CUL Culture
.DIV Diversity and Race
.ELE Elementary Education
.ENV Environmental Studies
.FRP Facilitating Reflective Practice and Group Processes
.GEN Gender, Women
.GOV Government Agencies & about Government
.INT International and Foreign
.LAN Language
.LRN Learning Styles, Learning Theory and Cognitive Styles
.MED Medical Settings, Health
.MOR Moral education, ethics, empathy
.MSE Middle and Secondary Education
.RPN Reflective Practitioner's Narrative/Portfolio
.SCI Science and Math. Ed.
.SOC Social change, Politics, Activism

.SPE Special Education
.SPO Sport, Outdoor
.TCE Teacher ed, College level ed.and Student Affairs & Adult Ed
.TEC Technological
.THR Theory
.WRL Writing, Reading, Literature, Literacy
as yet uncoded

Summary of numbers and areas of syn/theses completed, 1980-2000

	1980-84	1985-89	1990-94	1995-00	1980-00	%s
ART	0	0	0	1	1	0
COM	0	0	6	2	8	4
COR	0	0	5	4	9	4
CTY	0	1	4	0	5	2
CUL	0	1	7	8	16	8
DIV	0	0	0	6	6	3
ELE	0	2	18	10	30	15
ENV	0	1	0	2	3	1
FRP	0	0	0	1	1	0
GEN	0	0	4	11	15	7
GOV	1	0	2	0	3	1
INT	0	0	0	2	2	1
LAN	0	0	3	3	6	3
LRN	1	0	0	6	7	3
MED	0	0	6	4	10	5
MOR	2	0	4	10	16	8
MSE	1	0	20	7	28	14
SCI	1	2	11	7	21	10
SPE	0	0	0	1	1	0
SPO	0	0	0	5	5	2
TCE	1	2	3	8	14	7
TEC	0	0	2	4	6	3
THR	1	3	8	9	21	10
WRL	2	6	7	7	22	11
TOTAL	8	17	73	106	204	

Artistic, film, musical, and theatrical production

(abstract) Managing a Creative Practice
(abstract) Tension and Critical Thinking in Art
(abstract) Destination?: A Play About Workplace Ethics
(abstract) A Journey To Make Documentaries That Entertain As Well As Enlighten
(abstract) Creating a Life of Art: a Personal Journey Towards Creative Freedom
(abstract) Doodles to Drawings: The Creative Process of Drawing &Thinking for Cartooning
(abstract) The View Finder: Discovering My Artist Path Through Photography
(abstract) Musical Composition: A Personal Journey of Discovery Through Critical and Creative Thinking
(abstract) Basic Training: Inspiring Institutional Change in Higher Education in the Fine and Professional Arts Through Wholistic Practice and Sustainability Education
(abstract) Building and Sustaining Connectedness to One's Musical Creativity and Spirit
(abstract) Creative Thinking in Drawing
(abstract) Addressing Gender Equity through Artistic Process

Communication & Dialog

(abstract) Embracing Systems Thinking and the Dialogue Process Within My Classroom
(abstract) The Use of Dialogue in Education: Research, Implementation and Personal/Professional Evaluation
(abstract) Communicative Competence and Communicative Ethics
(abstract) A Case for Dialogue in Public Education: Individual and Collective Learning through the Dialogue Process
(abstract) Using Stress Management to Promote Critical Thinking

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Community Settings

(abstract)Mentoring Towards Resilient Thought
(abstract) A Plan For A Community Education Center In Japan
(abstract) Critical and Creative Thinking in School Age Child Care Projects and Play
(abstract) School/community cooperation: Action-involved learning

Corporate and workplace

(abstract)Using Critical and Creative Thinking to Enhance Productivity in Integrated Marketing Communications Meetings and Procedures
(abstract)Bringing Community College Students and Employers Together: A Guide For Employers And Career Centers in an Economic Decline
(abstract)Promoting Rapid, Sustainable Operational Change in Business Organizations
(abstract)From Humor In The Workplace To Humor As A Means Of Healing From Loss
(abstract)Individual Transitions Between Organizational Cultures
(abstract)Next Steps in the Journey Toward Self-Fulfillment
(abstract)Developing My Knowledge and Experiential Understanding Towards a Creative Contribution to Work &Family / Life Balance
(abstract) Evaluating Different Forms of E-Learning
(abstract) Train The Trainer Workshops: Enhancing Listening And Social Skills to Improve Employment Opportunities For Individuals With Disabilities
(abstract) Team Leadership Approaches for Corporate Project Managers
(abstract) Critical Thinking in the Workplace
(abstract) A Structured Approach to Training and Development Programs for Business and Organizational Leaders
(abstract) Developing Generative Leadership through Emergent Learning
(abstract) Using Critical and Creative Thinking Skills to Enhance Integrity in Business Organizations
(abstract) Facilitating Creativity in Corporate Culture
(abstract) Restructuring MBA Programs for Leadership Development: Critical and Creative Thinking as a Strategic Framework
(abstract) Critical and Creative Thinking for Corporate Managers
(abstract) The Critical Thinking Salesperson
(abstract) The Thinking Business

Culture

(abstract) New representations of Afro-Americans in films: an analysis of 'Do the right thing' and 'Eve's Bayou' following the framework of Stuart Hall
(abstract) Multiculturalism as a Mechanism For Improving Thinking
(abstract) Including Spirituality Into Systems of Western Psychology

(abstract) Documenting the Undocumented in Italo-American Female Creativity
(abstract) The role of examination reform as a catalyst in directing educational change in India
(abstract) Development of Critical Thinking through Art Production
(abstract) Philosophical Issues in the Practice and Pedagogy of Film
(abstract) Critical Thinking and the Critical Viewing of Art
(abstract) Integrating Thinking, Whole Language and Drama
(abstract) An Exploration of Personal Process as Manifested in Painting
(abstract) Children's Aesthetic Perception: A Developmental Study of Judgements and Attitudes Concerning the Drawings and Paintings of Children
(abstract) Infusing Thinking Skills into Media Literacy Education: An Education's Practical Workbook

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Diversity and Race

(abstract) Critical and Creative Thinking in Transracial Adoption
(abstract) An Immigration Unit: Appreciation and Tolerance
(abstract) A Diversity Curriculum for Gay and Lesbian Teens in Middle School
(abstract) A multicultural moral education: A history and companion curriculum unit
(abstract) Integrating critical and creative thinking into cartoon animation for preschool children

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Elementary Education

(abstract)Children's Story: Per-Se-Vere
(abstract) Meeting the Cognitive Goals of an Educational Plan for Gifted Second Graders
(abstract) Provincetown Framework for Infused Thinking
(abstract) The Cultivation of Thinking Dispositions in Grades Three and Four
(abstract) Flying with Imagination: Co-Pilot of Critical and Creative Thinking
(abstract) First Graders Solving Problems
(abstract) Modifying and Integrating Critical Thinking Into the Traditional Pedagogy of Saudi Girls' Elementary School
(abstract) Thinking And Learning Through Creative Movement In The Classroom
(abstract) Critical Thinking Considerations for an Elementary Science Magnet

School
(abstract) Children's Safety Zone and Gateways to Life-long Learning
(abstract) Analysis of McCarthy Learning Styles and Integration of Critical and Creative Thinking
(abstract) Promoting Geometric Thinking in Grade Four
(abstract) Metacognition in the Elementary Classroom: An Exploration
(abstract) Building a Home for Thinking Transfer
(abstract) Creative Problem Solving with Tangrams
(abstract) Critical and Creative Thinking and Humor
(abstract) Empathic Role Taking in Social Studies: A Fifth Grade Curriculum Based on Critical and Creative Thinking
(abstract) Creative Problem Solving: Nine Model Lessons on the Rainforest
(abstract) Looking for the Question: A Critical Thinking Goal for a Second Grade Teacher
(abstract) Big Ideas for Little People: Critical Thinking and Mathematical Concept Exploration in Elementary School
(abstract) The Reference Connection: Teaching Thinking Skills Within the Library Reference Interview
(abstract) A Thinking Skills Approach to Affirmation and Conflict Resolution
(abstract) Introducing Problem Solving through Literature at the Elementary Level
(abstract) Shadows: An example of conceptual change

Environmental Studies

(abstract) Pond Secrets: Reflections for Thought and Virtue
(abstract) Cross-Cultural Teaching and Learning: Teaching Environmental Education in Costa Rica

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Facilitating Reflective Practice and Group Processes

(abstract)Mentoring Towards Resilient Thought
(abstract) Exploring The Teaching Mind: Extending Participation in Lifelong Learning Through Engagement With a Supportive Community
(abstract) A Commitment For Change
(abstract) Facilitating a Learning Work Environment Through Teamwork Strategies: One Nurse Manager's Journey

(abstract) Building and Sustaining Connectedness to One's Musical Creativity and Spirit
(abstract) The Quest For Meaning: A Practitioner's Narrative
(abstract) Learning to See in the Dark: The Parameters of Practice Based Dialogue
(abstract) Stepping Stones for Living Creativity: A Holistic Approach to Critical and Creative Thinking

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Gender, Women

(abstract) Helping Middle School-Age Girls Understand the Value Of Participating in Physical Education Programs Through Critical and Creative Thinking
(abstract) Images of Women in Sport and Media: A Critical Look at Recurring Themes from 1920 to the Present
(abstract) Creativity Empowerment for Women: Workshops and Practices for Lifelong Learning and Growth
(abstract) When There Will Be Great Women Artists
(abstract) A Thinking Woman's Definition of Meaningful Work
(abstract) Richard Paul, Gloria Anzaluda, and Mestiza Consciousness: Shifting the Borders of Critical Thinking
(abstract) Critical Thinking and Cedaw: Women's Rights as Human Rights
(abstract) From Failure-Orientation to Mastery-Orientation: A Workshop for Women
(abstract) A Critical Thinking Unit on Electricity and Magnetism to Encourage Females and Minorities
(abstract) Empowerment through Creativity: A Workshop for Women
(abstract) The Development of Self in Women: Healing Workshops for Survivors of Sexual Abuse
(abstract) Emergent creativity: A case study (abstract) Promoting a healthier life-style by bridging the 'life-times' gap
(abstract) Freeing the Female Voice: Pedagogical and Methodological Changes in One Teacher's Story
(abstract) Addressing Gender Equity through Artistic Process

Government Agencies, about Government

(abstract) Teaching Government: The Child as a Power Base

International and Foreign

(abstract) The Role of Examination Reform as a Catalyst in Directing Education Change in India

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Language

(abstract) Meaning Through Metaphor: Visual Dialogue And The Picturing Of Abstraction
(abstract) A Social Constructivist Approach To Content-Based Foreign Language Instruction
(abstract) Cognitive Problems, Metacognition, and Philosophy of Language
(abstract) Learning How To Teach How to Learn English As A Second Language: Reflections from Experience, Praxis, and Theory (Vol 1,2)
(abstract) Teaching Foreign Languages in Context: Intermediate Italian and Critical Thinking
(abstract) Family Resemblance: A Study of Linguistic Conformity Within Family Systems

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Learning Styles, Learning Theory, Cogn. Styles

(abstract)Constructivist Learning Verses Explicit Teaching: A Personal Discovery of Balance
(abstract) Verifying the Teaching of Analogies to Fourth Grade Students
(abstract) A Learning Style Approach to Curriculum Design
(abstract) Transfer of Learning: An Inquiry into the Generalizability of Metacognitive Thinking Strategies
(abstract) Productive Aging and the Creative Flow
(abstract) Some Implications of Educational Cognitive Style as it Relates to Critical Thinking Skills

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Medical Settings, Health

(abstract) Identifying Methods Nurse Managers Can Implement To Foster A Supportive Environment For Staff Where Disruptive Behavior Exists

(abstract) Illness Stories: From Recognizing The Significance In Care To Planning My Own Storied Practice
(abstract) Refining Operating Room Communication: Creating A Culture Of Improved Teamwork For The Future Of Perioperative Nursing
(abstract) Facilitating a Learning Work Environment Through Teamwork Strategies: One Nurse Manager's Journey
(abstract) Euthanasia: Understanding Ethical Issues Through Role-Play
(abstract) Creative Drama and Youth Voice: Teaching Health Topics and Empowerment Through Theater and Peer Education
(abstract) Enhancing Thinking Ability in Beginning Nursing Students
(abstract) Critical Thinking and Client Centered Nursing Care
(abstract) Adolescents and AIDS: Dealing with Misconceptions
(abstract) Critical and Creative Thinking for Nutritionists: A Training Program

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Moral education, ethics, empathy

(abstract) Empathy and Communication: Educating for Interaction
(abstract) Curriculum Unit: Developing Morals and Critical and Creative Thinking Skills through the Novel: Number the Stars by Lois Lowry
(abstract) Creative Conflict Resolution: Teaching Children Critical and Creative Thinking Skills and Dispositions
(abstract) A Critical and Creative Thinking Bible Curriculum
(abstract) Philosophical Teaching as a Means for Raising Critical and Moral Consciousness
(abstract) The Critical Moral Classroom: An Approach to Teaching Values
(abstract) The Foundations of Morality
(abstract) Young Adults' Moral Education: A Critical Reflective Thinking Approach
(abstract) Helping Adolescents to Address the Moral Dimensions of Sexuality
(abstract) The Relationship of Empathy to Effective Speaking: Critical and Creative Thinking in the Speech Process
(abstract) Empathy, Critical Thinking, and Creativity: Theories, Training, and Interrelationships
(abstract) Philosophic Inquiry in a Pre-College Setting
(abstract) The Role of Precollege Philosophy in Education
(abstract) A multicultural moral education: A history and companion curriculum unit
(abstract) Teaching Students to Make Ethical Decisions Using Literature as a

Springboard
(abstract) Curriculum Unit: Developing Respect

Middle and Secondary Education

(abstract)Navigating the Complexities in Teaching: Exploring the Thinking Processes that Trigger and Sustain Teacher Development
(abstract)Changing My Perspective on Intelligence
(abstract)Social Action Teaching: Engaging Middle School Students in Knowing And Doing in the Social Studies Classroom
(abstract)Original Curriculum for Encouraging Meaningful Community Service in High School Students
(abstract) Teaching Economics In United States History: One Teacher Shares Some Lessons
(abstract) Reducing Communication Apprehension To Improve Self-Concept: An Adaptable Public Speaking Curriculum For Secondary School
(abstract) Cultivating Thinking Dispositions in Middle School Learning Disabled Students: A Unit Plan
(abstract) A Conceptual Change Approach for Teaching Matter to Sixth Grade Students: Integrating Activities, Experiments, Writing Responses and Verbal Discussion into the Classroom
(abstract) Critical Thinking Through Manipulatives: A Staff Development Intervention for Middle Grades
(abstract) Assessing Thinking in Middle School Students
(abstract) In Defense of Tall Poppies: A Middle School Approach to Higher Order Thinking
(abstract) Mythology in the Middle School: A Thinking Skills Curriculum Unit
(abstract) Teaching Thinking Skills in the Content Area: A workshop for Secondary School Teachers
(abstract) Incorporating Inventive Thinking in the Middle School Life Science Curriculum
(abstract) Holistic Perception in Literature
(abstract) Unexamined Consequences: Ideology, Critical Thinking, and the Reagan Revolution
(abstract) Developing Student Participatory Skills in an Urban Middle School
(abstract) A Thinking Skills Approach to the Humanities
(abstract) Conceptual Understanding of Quadratic Expressions
(abstract) A Critical Evaluation of the Thinkabout Instructional Television Curriculum

(abstract) Teacher as Researcher: A Two-Tiered Model
(abstract) Metacognitive Strategies for Vocabulary and Concept Learning: A Framework Using Content Area Textbooks
(abstract) Thinking about Grammar in the Middle School: A Study and Recommendations
(abstract) Explicit Integration of Critical Thinking into Content Area Instruction
(abstract) Critical Thinking in Social Studies: A Model of Infused Lessons for the Intermediate Grades
(abstract) Teaching American History and Thinking Skills: The Nineteen Twenties in America and Lessons in Critical and Creative Thinking and Philosophical Inquiry
(abstract) Critical Thinking and Middle School Mathematics
(abstract) Critical and Creative Thinking in the Newsroom: A High School Curriculum Reinforcing Reading and Writing in a Non-Traditional Learning Environment
(abstract) Alternative Concepts of Geology and Time in Secondary Science Education
(abstract) Death and Dying: A High School Curriculum

Reflective Practitioner's Narrative/Portfolio

(abstract) Recovery and Discovery to Become a Balanced Thinker-And Beyond
(abstract) Creating a Life of Art: a Personal Journey Towards Creative Freedom
(abstract) The View Finder: Discovering My Artist Path Through Photography
(abstract) How a Business Plan Turned Into a Life Plan Through The Application of Critical and Creative Thinking Skills
(abstract) Personal Experience and Professional Development Through Critical and Creative Thinking
(abstract) The Journey
(abstract) Dear Bob: Letters to a first year math teacher

Science and Math. Ed.

(abstract) Rationale and Provisional Lesson Plans For Learning High School Science Through Discovering Dialectically and Creatively
(abstract) Training Teaching Assistants In Theory And Methods: The Next Professors Of Biology
(abstract) Staircase To Slope: A Mathematics Learning Expedition

(abstract) Learning, Teaching and Brain Research: Insights From Current Research That May Affirm Teaching and Learning Strategies
(abstract) Narrative Inquiry: Conversations That Reinforce My Commitment To Inquiry Based Learning
(abstract) Why are Fractions So Hard? Conquering Students Lack Of Comprehension Of Fractions
(abstract) Addressing the Inadequacies of Information Available on the Internet: The Prospect for a Technical Solution
(abstract) A Conceptual Change Approach for Teaching Matter to Sixth Grade Students: Integrating Activities, Experiments, Writing Responses and Verbal Discussion into the Classroom
(abstract) Mathematical Problem Solving: Rationale and Approach for Change
(abstract) Using Computer Technology to Teach Thinking
(abstract) Critical and Creative Thinking Through Space Exploration
(abstract) A Teachers Guide to Improving Students Creative Thinking in Mathematics
(abstract) Using Science Misconceptions for Developing Critical Thinking in Learners and Teachers
(abstract) Student Held Misconceptions Regarding Area and Perimeter of Rectangles
(abstract) Restructuring for Mathematical Power: Techniques for Teaching Thinking in Algebra
(abstract) Who is a Scientist?: Effects of an Intervention to Change Students' Ideas about Science and Scientists
(abstract) Critical Thinking Skills in a Meteorology Curriculum
(abstract) Critical Thinking and Problem Solving in Mathematics
(abstract) Cooperative Learning on Mathematical Problem Solving: Reflections by a Traditional Teacher and Her Students
(abstract) Applying Cognitive Strategies to Critical Barriers in Learning a Science Concept: Groundwater Conceptual Change
(abstract) Process Writing: A Comprehensive Methodology for Teaching Thinking and Learning Science

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Social Change, Politics, and Activism

(abstract)Social Action Teaching: Engaging Middle School Students in Knowing And Doing in the Social Studies Classroom
(abstract)Original Curriculum for Encouraging Meaningful Community Service in High School Students

(abstract) Fighting Traffic Congestion in Metropolitan Phoenix by Making Public Transportation a Success
(abstract) Leadership Of A New Generation To Forge Peace, Progress And Prosperity For All

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Special Education

(abstract) At The Heart of It All: A Self-Esteem Curriculum For Students With Learning Disabilities
(abstract) Dear Bob: Letters to a first year math teacher
(abstract) Student's Mathematical Thinking and Curriculum Change

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Sport, Outdoor

(abstract) Helping Middle School-Age Girls Understand the Value Of Participating in Physical Education Programs Through Critical and Creative Thinking
(abstract) Creative Skating: A Creative Approach to Figure Skating
(abstract) A Critical and Creative Thinking Guide to Achieving Success in Coaching
(abstract) Applying Critical and Creative Thinking Sports Psychology and Motivation
(abstract) Winning in Athletics
(abstract) Emergent creativity: A case study

Teacher ed, College level ed.and Student Affairs & Adult Ed

(abstract)Bringing Community College Students and Employers Together: A Guide For Employers And Career Centers in an Economic Decline
(abstract) Incorporating Service-Learning Into The Esl Curriculum: What Aspiring Practitioners Need to Know
(abstract) Exploring The Teaching Mind: Extending Participation in Lifelong Learning Through Engagement With a Supportive Community
(abstract) My Search for a Meaningful Information Literacy Course: A Drama in Three Acts
(abstract) Traditional and Non-Traditional Graduate Academics: Two Models for Consideration

(abstract) Web-Based Transitioning for Students with Disabilities: Learning from Existing Limitations to Design a Process that Leaves No Child Behind
(abstract) Pomp In Circumstances: Paradox, Oppositions, Metaphors and Philosophy in The Context of Adult Basic Education
(abstract) Creating Inner and Outer Sacred Space: An Adult Learner Program's Wholistic Approach to Supporting Low-Income Women Who Have Been Impacted by Violence
(abstract) My CCT Guidebook: Keeping The Critical and Creative Thinking Momentum Alive
(abstract) Teaching Critical Thinking as a Late-Life Career Change
(abstract) A Plan For A Community Education Center In Japan
(abstract) Basic Training: Inspiring Institutional Change in Higher Education in the Fine and Professional Arts Through Wholistic Practice and Sustainability Education
(abstract) Finding Voice: Turning Fragments Into Stories -- Teaching Memoir to Enhance the Journey of the Non-Confident Student
(abstract) Reorienting College Student Affairs Activities to Emphasize Student Learning Through Experiential Approaches
(abstract) Inviting Critical and Creative Thinking into the Classroom
(abstract) Training Leaders in Higher Education: A Design for a Professional Development Workshop in the Area of Student Affairs
(abstract) Critical Thinking Dispositions: The Need for a Balanced Curriculum in Collegiate Critical Thinking Courses
(abstract) Critical Thinking and The Community College
(abstract) Paradox of Difference: Teaching Metacognition to Adolescents
(abstract) How Does the Teacher Know? One Teacher's Search for Authenticity in the Classroom
(abstract) Using Hands-On Manipulatives to Teach Problem Solving
(abstract) A Teachers' Guide to Improving Students' Creative Thinking in Mathematics
(abstract) Changing Mathematics Learning Through Changing Teachers' Thinking
(abstract) Teaching Critical and Creative Thinking Skills as Part of the Technical Communications Curriculum
(abstract) Writing Toward Understanding
(abstract) The Impact of Creative Thinking Skills on Classroom Behavior
(abstract) The Role of Critical and Creative Thinking in Academic Retention Strategies for College Students
(abstract) The Quest For Meaning: A Practioner's Narrative

Technological

(abstract) Evaluating Different Forms of E-Learning
(abstract) A Children's Realm: An Experiment Using Life-Sized Manipulatives to Expand Exploring and Learning Opportunities for Children
(abstract) The Impact and Implications of the New Technologies: Educational Imperatives for a New World of Work
(abstract) 20 Questions Toward Better Thinking: A Look at Internet Based Learning
(abstract) Interpersonal Communication and Critical Thinking; Exploring Power and Solidarity in a Computer-Mediated Conversation.
(abstract) Developing the Critical Literacy Web

Theory

Tower
(abstract) Developing Healthy and Balanced Minds: How Creative, Critical and Moral Thinking Promote Good Cognition
(abstract) Meaning Through Metaphor: Visual Dialogue And The Picturing Of Abstraction
(abstract) Metacognition And Critical Viewing Curricula: A Symbiosis
(abstract) Education and the Cognitive Development of Creativity
(abstract) The Computer As A Tool: The Metaphor In Educational Settings
(abstract) Three Theories of Development: A Comparison of Dewey, Kohlberg, and Noddings' Models of Moral Growth
(abstract) Remapping Critical Thinking Theory: A Critique of Richard Paul's Model of Critical Thinking
(abstract) Coaching for Thinking and Life Skills
(abstract) Exploring Graphokinesics Critically and Creatively
(abstract) Accessing the Creative Process
(abstract) Personality and Problem Solving: An Exploration Using a Computerized, Ill-Defined Problem
(abstract) A Storyteller Versus Three Theorists: One Writer's Creative Process and Current Creativity Theory
(abstract) Philosophical Spacing (PS): It's Function and Composition in the Philosophical Dialectics of Matthew Lipman's Philosophical Novels for Children
(abstract) Inventure
(abstract) Literacy as a Source for Critical Consciousness Thought, Language,

and Concept of Self
(abstract) Awakening Creative Behavior: Contributions from the Rudolf Steiner Method
(abstract) Waldorf education: Pedagogy in support of good thinking
(abstract) The Influence of Critical and Creative Thinking Skills on Curriculum Design and Course Teaching Strategies
(abstract) In Search of an Operational Definition of Social Creativity

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Writing, Reading, Literature, Literacy

(abstract) Fiction Writing and the Unconscious: A Memoir
(abstract) Discovering and Adapting Creative Style With Cognitive Methods
(abstract) Finding Meaning Through Writing: A Personal Journey Into Writing Development Through Writing Workshops, Personal Experimentation, and Finding The Balance to Create Ideal Writing Environments and Communities With Elementary School Students
(abstract) tales of gen x nothing: A synthesis of theory and practice
(abstract) A Teller's Tale: Joining The Circle -- A Discussion of Process in The Writing of a Novel for Young Adults
(abstract) Finding Voice: Turning Fragments Into Stories -- Teaching Memoir to Enhance the Journey of the Non-Confident Student
(abstract) The Writing of a Novel
(abstract) Essays on Monkey: A Classic Chinese Novel
(abstract) Changing Practices in the Assessment of Writing a Discipline Redefining Itself
(abstract) A Portfolio Model for Teaching Writing and Thinking
(abstract) Critical Thinking In Elementary Science Instruction Using Portfolios And Cooperative Learning
(abstract) A Critical and Creative Approach to enhancing Student Writing
(abstract) Writing Essays on Advertisements to Teach Critical and Creative Thinking
(abstract) Critical Thinking in Reading: A Whole Language Approach
(abstract) Merging Instruction in Thinking and Writing
(abstract) Critical Thinking through Literature: A Dialogue Teaching Model
(abstract) Challenging Children to Think: Using Reading to Teach Critical and Creative Thinking
(abstract) Critical and Creative Thinking: A Literature Approach
(abstract) Critical Thinking Skills and Motivation: A Model for Literature

(abstract) A Critical and Creative Thinking Curriculum Guide
(abstract) Promotion of Critical and Creative Thinking Skills through the Teaching of Poetry
(abstract) Altering Habit-Bound Thinking Through a Critical Thinking Skills Approach to Children's Literature
(abstract) Developing the Critical Literacy Web
(abstract) Looking forward looking back: A retrospective of writing
(abstract) Teaching Students to Make Ethical Decisions Using Literature as a Springboard

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Uncoded

(abstract) Blanchard , info missing
(abstract) Burpee-Robert , info missing
(abstract) Goncalves , info missing
(abstract) Guillette , info missing
(abstract) King, info missing
(abstract) Nichols , info missing
(abstract) Patterson , info missing
(abstract) Yuksel , info missing

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home

Critical & Creative Thinking Graduate Program
Reflective Practice and Metacognitive Portfolios

Rationale

A portfolio often means a showcase or a display for others of achievements, but the "Reflective Practice and Metacognitive Portfolio" (RPP) is designed to be a **self-customized tool box and set of reminders** that students intend to use in their on-going learning and practice (including their work beyond/after CCT) embedded in a **narrative**. This narrative should be updated each semester after reflecting on themes and connections across courses. The minimum tool-box would include specific assignments in each course designed so that they could be components in a portfolio.

Asking students to build this kind of portfolio during their studies matches the goals of personal and professional development captured by the Program overview, excerpted below (from http://www.cct.umb.edu/overview.html), with emphasis added here. The original pilot program is now a formal requirement in the M.A.program of studies.

- The Critical and Creative Thinking (CCT) program at the University of Massachusetts Boston provides its students with *knowledge, tools*, experience, and support so they can *become constructive, reflective agents of change* in education, work, social movements, science, and creative arts.

- Critical thinking, creative thinking, and reflective practice are valued, of course, in all fields. In critical thinking we seek to scrutinize the assumptions, reasoning, and evidence brought to bear on an issue-by others and by oneself; such scrutiny is enhanced by placing ideas and practices in tension with alternatives. Key functions of creative thinking include generating alternative ideas, practices, and solutions that are unique and effective, and exploring ways to confront complex, messy, ambiguous problems, make new connections, and see how things could be otherwise. In *reflective practice we take risks and experiment in putting ideas into practice, then take stock of the outcomes and revise our approaches accordingly*.

- The rationale for a distinct Masters and Certificate program of study in CCT is that an explicit and *sustained focus on learning and applying ideas and tools* in critical thinking, creative thinking, and reflective practice allows students involved in a wide array of professions and endeavors to *develop clarity and confidence to make deep changes* in their learning, teaching, work, activism, research, and artistry. By the time CCT students finish their studies they *are prepared to teach or guide others [and themselves] in ways that often depart markedly from their previous schooling and experience*.

- In these processes of transformation and transfer, CCT students have to *select and adapt the ideas and tools presented by faculty* with diverse disciplinary and interdisciplinary concerns. Although each CCT course is self-contained and is open to students from other graduate programs, students matriculated in the Program benefit from extended relationships with core CCT faculty and fellow students that support their process-learning-experimenting and taking risks in applying what they are learning, reflecting on the outcomes and revising accordingly, and *building up a set of tools, practices, and perspectives that work in their specific professional or personal endeavors*.

Mechanics

Portfolio = Narrative + self-customized tool box and set of reminders.
The toolbox/reminders might include each of the components designed with the Portfolio in mind from the required courses plus optional additions from any other course, or other pieces chosen by the student. Excerpts from the toolbox/reminders or other pieces may be woven into the narrative.

The portfolio should be updated each semester (or two if the student is moving slowly through the program). With each update, additions should be made to the narrative. Sometimes, however, the previous narrative will be superseded and the old version might become an exhibit to show the student's evolving process.

The portfolio can be assembled in a number of ways: as an all-in-one word/pdf file; as a wikipage on which the student presents a narrative that includes links to exhibit files (uploaded either on a personal wikispace or on this CCTRPP wikispace), or in other forms (e.g., RPP on a personal website). When all is said and done, the portfolio (minus any sections that the student wants to keep private) should be linked to this site and available for others to view, reflect on, and be inspired by.

All wikipages and uploaded files created and linked by students on this wiki must begin with the student's initials in uppercase. (If the initials have already been "taken" by a previous student, add an extra letter in lower case, e.g., PTa for Peter Taylor.)

See instructions for how-to's about wikis.

A show-and-tell introduction will often be part of CCT orientations, supplemented by general introductions to using a wiki that might be given in specific courses or by more experienced peers, and by perusing how the portfolios below have been constructed.

Index of Portfolios

Note (22 Oct '09): The portfolios produced before the RPP became a formal program requirement go beyond the guidelines above and have their own distinctive approaches. (They are often more like a showcase than a toolkit.) When some model RPP's are available, these will be highlighted so that subsequent students can refer to them as models.
(To students: Insert a link to the your portfolio in alphabetical order by your last name. This link may be to your narrative page on this wiki, to a narrative page you create on your own wikispace, to the uploaded all-in-one word/pdf file, or to a personal website version of your RPP.)

Jan Coe
Jeremy Szteiter
Renessa Ciampa

Tara Tetzlaff

Our Lives and Other Worlds

Reflections from Graduates of the Critical & Creative Thinking Program

The basic model for these events is that presenters have 10-20 minutes each to explain their work and reflect on how this has developed in relation to their CCT experiences. We ask the audience to write down or hold onto questions till the end of the presentations. Then we have a discussion that includes all the presenters as well as commentators drawn from the wider CCT community and/or the UMB faculty. The event is audio-taped and available (after cleanup, and with presenters' permission) as a podcast linked to the CCT wiki (below) and to the social network site.

The evenings are a wonderful experience in their own right, but we also see them as part of the CCT Network's effort to acquaint alums who have overlapping interests with each other and thereby provide a model for current students of a wider and more sustained network of support for their endeavors during and after their studies. After all, the CCT faculty can remember students from various years, but these graduates may never have met -- and they form a network of contacts, inspiration, and expertise far more extensive than the faculty can provide.

Audio recordings can be listened to at http://www.talkshoe.com/tc/16894. If you use the download option instead of the listen option you'll be able to fastforward when you want. Use of headphones to listen is recommended.

I. Writing, Stories, and Reflections... Feb. '08

II. Visual Images and Reflections... Oct. '08

- View the accompanying visuals by clicking on the links.

III. Music, Performances, and Other Reflective Notes... Feb. '09

IV. Workplace innovation, Leadership, and Organizational development Oct. '09

V. Educational Change, Leadership, and Teaching/Learning Interactions Mar. '10

TalkShoe does not support these browsers: Internet Explorer below version 6, Firefox below version 2, Opera version 8, or Safari below version 3, or Google Chrome below version 3.
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CCTNetwork Events

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Last Recording

Title: Storytelling and the Personal Journey

Description: n/a
Hosted by: CCTNetwork
Phone Number: (724) 444-7444
Call ID: 16894

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Past Episodes (54)

First ◄ 1234 ► Last

Time:	Duration:	Title:	Recordings:
11/01/2010 06:30 PM EDT	1:22:21	Storytelling and the Personal Journey	DOWNLOAD LISTEN
10/04/2010 08:30 PM EDT	24:33	Our Lives and Other Worlds VI: Science in a Changing World-Michelle Hardy	DOWNLOAD LISTEN
10/04/2010 08:00 PM EDT	19:33	Our Lives and Other Worlds VI: Science in a Changing World-Pam DiBona	DOWNLOAD LISTEN
10/04/2010 07:30 PM EDT	11:45	Our Lives and Other Worlds VI: Science in a Changing World-Felicia Sullivan	DOWNLOAD LISTEN

10/04/2010 07:00 PM EDT	18:22	Our Lives and Other Worlds VI: Science in a Changing World-Jan Coe	DOWNLOAD	LISTEN
10/04/2010 06:30 PM EDT	29:40	Our Lives and Other Worlds VI: Science in a Changing World-Karen Crounse	DOWNLOAD	LISTEN
09/13/2010 06:30 PM EDT	2:03:21	Presentation by Ashok Panikkar: Multinational Conflict Management	DOWNLOAD	LISTEN
05/19/2010 06:00 PM EDT	1:07:40	Nina Greenwald and Critical & Creative Thinking: 25 Years and More	DOWNLOAD	LISTEN
05/10/2010 08:00 PM EDT	21:59	CCT Spring 2010 Reflective Practice - Meghan Callaghan	DOWNLOAD	LISTEN
05/10/2010 07:30 PM EDT	15:11	CCT Spring 2010 Reflective Practice - Gina Dillon Podolsky	DOWNLOAD	LISTEN
05/10/2010 07:00 PM EDT	17:11	CCT Spring 2010 Reflective Practice - Jeremy Poehnert	DOWNLOAD	LISTEN
05/10/2010 06:15 PM EDT	42:14	CCT Spring 2010 Syntheis - Candace McDuffie	DOWNLOAD	LISTEN
05/10/2010 05:30 PM EDT	41:56	CCT Spring 2010 Syntheis - Marie Levey-Pabst	DOWNLOAD	LISTEN
05/10/2010 04:45 PM EDT	45:20	CCT Spring 2010 Syntheis - Diana Truong	DOWNLOAD	LISTEN
05/10/2010 04:00 PM EDT	44:33	CCT Spring 2010 Syntheis - Sheila O'Shea Resto	DOWNLOAD	LISTEN

First ◄ 1234 ►

No reviews

A set of steps to prepare CCT students to complete a synthesis during their final semester (or very soon after) (version 12/09/08, rev. 11/28/09 & 5/20/10)

The CCT faculty thinks the Program needs to do better in helping students complete their capstone syntheses in a timely manner. To this end, we want to institute or affirm the practices and requirements to follow. Please peruse the various links to appreciate the rationale for these practices.

1. Entrance interview with your general advisor and other faculty members (before or soon after admission)

At this time we would encourage you to

Explore and become familiar with the resources available in the website, handbook, and wiki: http://www.cct.umb.edu , http://www.cct.umb.edu/handbook.html , http://cct.wikispaces.com

Submit a provisional plan for taking courses, http://www.cct.umb.edu/planner.html

Make your own connections among ideas and experiences from different courses by starting a Reflective Practice/Metacognitive Portfolio, http://cctrpp.wikispaces.com/

Participate in monthly CCT Community activities, http://cct.wikispaces.com/CCTNetwork

Join the social network site ("ning") in order to connect with alums and other members of the wider CCT community whose interests you share or are intrigued by, http://cct.wikispaces.com/CCTNetworkNing

Take steps to acquire Research and Study Competencies progressively over the course of your studies, http://www.cct.umb.edu/competencies.html

2. Mid-program check-in

Two weeks after the end of the semester in which you take their fifth course towards the CCT M.A. you should submit your Reflective Practice/Metacognitive Portfolio thus far and evidence of Research and Study Competencies you have acquired.

The CCT faculty will review these and meet with you to make recommendations (which *may* include suggesting that you put a hold on taking courses in order to finish incompletes and/or spend a semester improving writing skills and acquiring more Research and Study Competencies)

3. Advance preparation for Capstone

Use an elective to take a specialized course outside CCT (if appropriate) or do an

independent study to complete literature review for the synthesis project. (The change, effective for students starting fall 2008 and beyond, to require 4 rather than 3 electives was made with this in mind.)

Graduate Assistant as writing guide,
coaching you to get access to writing-improvement resources and courses available on and off campus, including Graduate Writing Center, paid editors, and (possibly) CCT alums who will serve as buddies

Look ahead and take note of the wide range of options for the capstone synthesis, http://www.cct.umb.edu/capstone.html. These options are starting points only.

See examples of previous students' projects, http://www.cct.umb.edu/abstracts-TOC.html, to appreciate the ways that students stretch or reconfigure the options to match the kind of project that is most helpful for their personal and professional development.

Continue to update Reflective Practice/Metacognitive Portfolio, so that reflection/ metacognition on CCT experience can enter your synthesis project.

Encourage more "practice" to be synthesized in the "synthesis of theory and practice," through a supervised experience in a school, workplace, or community setting in the Reflective Practice course (http://www.cct.umb.edu/courses#688)

4. Prerequisites for taking the Capstone Seminar

Completion of CCT 692, Processes of Research and Engagement

No more than one incomplete left and not on academic probation

Synthesis proposal submitted with advisors arranged before the semester starts, http://www.cct.umb.edu/synthforms.html .

Readers can be drawn from a wide range of part-timers and faculty from other departments, http://www.cct.umb.edu/synthadvisors.html

5. Capstone completion during final semester

Students start the synthesis project with a meeting at the end of the previous semester, or even at the start of the previous semester if the instructor has time to advise you during that pre-synthesis semester.

CCT tries to run the synthesis seminar every semester,
if need be by combining students from two semesters into one section's worth, even if some of you have to be supervised more like independent studies.

Students form buddy pairs to coach each other before and during the synthesis semester

Marathon day at the end of the semester* to provide faculty and peer support for students to focus and bring the pieces together and to complete the final steps (see " When you can see the end in sight," at http://www.cct.umb.edu/synthinfo.html).

(* Usually Saturday before Memorial Day and, if needed, two Saturdays before

Xmas).

6. Capstone completion afterwards (revised 5/20/10)

Incompletes for the synthesis course require a signed completion contract. This contract gives you until the end of the grading period in a year's time to complete the capstone requirements (but encourages you to finish earlier). You also have to agree to meet with the primary synthesis advisor to discuss the feasability of completing the synthesis versus graduation with certificate if, 8 weeks before the deadline, you have not yet submitted a complete draft of the synthesis. If you do not finish, you are expected to graduate with a certificate instead of an M.A. (In this case, a student can apply for readmission to the M.A. program at a later date. Approval of readmission will normally be contingent on a complete synthesis draft being ready. On readmission, all courses previously completed for the M. A. will normally be counted.)

For each semester of incomplete completion, it is best to register for 1 credit independent study to affirm to yourself and your advisors that you want their involvement in completing your synthesis. Alternatively, if money is really an obstacle, you must, at least, pay program fees to keep your student status active. You are welcome to join the synthesis seminar or CCT692 again without charge provided you commit to attending regularly so you can be part of the new cohort. You are also welcome to participate in the writing support group if the group is convened. Each of these opportunities provides a structure and support system to complete the synthesis project. (However, again, it is best to register for 1 credit independent study.)

The synthesis advisor (or the synthesis instructor if the advisor is not a core CCT faculty member), not the Program Coordinator, takes responsibility for followup and coaching/coaxing their students through to completion. At the same time, as a matter of good professional practice, students should respond to emails and phone calls, even if it is to say—no apologies needed—that progress has been limited.

Marathon day (see above) is strongly recommended for incomplete synthesizers.

Incomplete synthesizers may consider the option to shift to a Reflective Practitioner's Narrative prepared in a way that weaves in work done throughout the program of study (including in a Reflective Practitioner's portfolio) and in what you have done to date in your incomplete synthesis project. This option should be pursued only after consultation with synthesis advisor, ensuring that everyone is on the same page about what is expected. (The CCT faculty are discussing a means for incomplete synthesizers to attempt this as a one-month intensive, in which case you can request to be given questions to guide you in producing this Narrative.)

Incomplete synthesizers may also consider the option to switch to the Learning, Teaching, and Educational Transformation (non-licensure) M.Ed. track, for which the capstone is a one-month comprehensive "exam" consisting of three short essays. Depending on which CCT electives you have taken, switching may require you to take one or two more courses to fulfill the LTET core requirements.
If you run up against the 5-year limit for completion, you can apply for a "statute of limitations" (S.O.L.) extension by submitting the required form with a concrete plan for completion that addresses reasons why you hadn't yet finished.
Before approving the S.O.L. extension (or approving readmission if you have let your student status become inactive), the program coordinator will ask (but not require) you to sign forms that allow you to be graduated with a Certificate if you "disappear" (i.e., stop paying program fees and communicating with your advisors). The reasons for the request are that the Program needs to reduce the number of students in the all-but-synthesis category and we believe that it is not good for students to have such unfinished business in their lives.

Science in a Changing World

engaging with scientific, technological, educational and social change

Masters, Professional Science Masters [*], and Graduate Certificate serving students who want to focus on science in the context of social change or individual intellectual development.

Course material, classroom activities, teaching/learning interactions, and projects focused on real-world problems provide students opportunities to:

- learn about science and its social context
- gain a set of models for work in education, policy, and other areas of civic engagement
- discuss practices and philosophies of science, education, and social change; and
- undertake research with a view to engaging with science in a changing social and personal world.

Students with diverse backgrounds and career paths--from laboratories to field research, journalism to policy formulation, teaching to activism--are welcome to join the track. In addition to examining Science and its Social Context, students develop valuable professional skills in Research, Writing, and Evaluation for Civic Engagement and in

Collaborative Processes and Problem-Based Teaching around current controversies involving science and technology.

Science in a Changing World students graduate well prepared to move across the persistent divide between sciences and humanities. They are able to participate in questioning and shaping the direction of scientific and social changes, as well as to teach and engage others to participate in this important endeavor.

Program Requirements

The 33-credit Masters requires 4 foundation courses, 4 electives, and 3 "research & engagement" courses culminating in a capstone "synthesis."
The 15-credit Graduate Certificate requires 2 foundation courses and 3 electives.
Courses offered face-to-face, online, or at-a-distance (=joining regular class over the internet, with other interactions online).
(Officially the Program is a track in the Critical & Creative Thinking Graduate Program.
* Council of Graduate Schools Certification as a PSM will be applied for in due course.)

I. Foundation courses

Either CrCrTh 640, Environment, Science and Society: Critical Thinking *Or* CrCrTh 645/Biol 545, Biology in Society: Critical Thinking
CrCrTh 650, Mathematics Thinking Skills
Pub Pol 749/CrCrTh 649, Scientific & Political Change
CrCrTh 652, Children and Science

Masters students take four Foundation courses; Certificate students choose two of the four.

II. Distribution recommendations/requirements

Electives can be chosen from across the Graduate School but it is recommended that the combination of foundation, elective, and research & engagement courses meet minimum numbers in each of the three areas of Science, Interpretation of Science in Context, and Pedagogy & Civic Engagement:

> --Masters students should aim for at least 4 courses in each area and, if Science is notthe student's undergraduate major or subsequent training, at least 6 in Science.

-- Professional Science Masters students must take at least 6 courses in Science and at least 3 in Pedagogy & Civic Engagement, one of which involves an internship or supervised activitiesin schools, workplaces, communities, businesses, or the policy arena.
--Certificate students should aim for at least 2 courses in each area and at least 3 in Science if this is notcovered in the student's training.

Notes:

i. Subject to the approval of the Program Director, up to two undergraduate courses (300-level or above) may count as electives.
ii. The Program Director, in consultation with the Program faculty, determines which distribution area(s) any course counts for. See current list of courses and areas in which they fit. Courses offered by departments in the College of Science and Mathematics, with the exception of policy-oriented courses, automatically count for the Science area. They are explicitly included in the list only if they also count for another area.
iii. Certificate students can take more than 2 foundation courses and count the extra ones as electives. CrCrTh 640 or 645 can be counted as an elective only if not taken as a foundation course.

III. Research & Engagement Courses

The last three required courses -- two precapstone courses, CrCrTh 692, Processes of Research and Engagement, and CrCrTh 693, Action Research, together with the capstone CrCrTh 694, Synthesis Seminar -- are designed to facilitate students' development in research, writing, and evaluation in some focused topic of their interest that brings the three SICW areas into dynamic interaction.

Advising

SICW students will, as far as possible, be guided by two advisors: a primary advisor from the SICW core faculty; and a "Complementary Content" advisor from the UMass Boston faculty, whose role is to ensure rigor in the scientific or interpretive knowledge base that is not covered in the student's past or current training. (For example, a student in Public Policy taking the SICW Certificate because of an interest in biotechnology policy might have a molecular biologist as the Complementary Content advisor.) PSM students will have a SICW core faculty advisor from a science discipline. Students work with their two advisors to fashion a set of electives that meet the distribution requirements and prepares the students for their final research and engagement projects.

Consult the online handbook for the CCT Program for step-by-step information about joining and moving through the SICW track. Apply to the CCT Masters or Certificate program, but state SICW track. Fall and spring admissions accepted. Contact the Program Director with additional questions, including those concerning the special characteristics of the SICW track.

SICW core faculty

Peter Taylor (Program Director; life, environmental, and health sciences in their social context; critical reflective practice in science; ecological complexity; gene-environment debates; social epidemiology) [617.287.7636, Wheatley Hall, 2nd Floor, Room 157]
Arthur Eisenkraft (science education, especially active physics)
Nina Greenwald (problem-based learning with biomedical cases)
Fadia Harik (mathematics education)
Arthur Millman (environmental ethics; philosophy of science)
Rachel Skvirsky (biology in a social context, especially genetics and molecular biology)
Carol Smith (children and science; conceptual change; cognitive development)
Robert Stevenson (citizen science; technological change, values & institutions)
Bala Sundaram (non-linear dynamics; mathematical biology)
Brian White (biology education; educational software and multimedia)

Other advisors

Gonzalo Bacigalupe, EdD, MPH (health care and social media/technologies, global health, and immigration)
Rick Kesseli (teaching literacy in genetics and the scientific process; molecular evolutionary genetics; conservation genetics; agricultural work involving genetically modified organisms
David Levy (environmental science in social context; innovation and renewable energy)
Scott Maisano (Shakespeare and automata)
Rosalyn Negrón (social network analysis; cultural and linguistic anthropology; integration of qualitative and quantitative research methods; multiple ethnic identifications in relation to health disparities and other social policy)
Mark Pawlak (quantitative literacy and reasoning; investigations pedagogy where college students create and apply mathematical models to real world data; effective use of ed. technology)
Louise Penner (literature and medicine; medical humanities)

Related UMass Boston-based activities

- Inter-college faculty Seminar in Humanities and Sciences
- New England Workshop on Science and Social Change
- Science in a Changing World wiki
- Twitter postings

This publication is drawn directly from the SICW website, http://www.stv.umb.edu/SICW.html. All information in this publication is subject to change. This publication is neither a contract nor an offer to make a contract. Last update 25 Nov. 09. Please alert the SICW Webster of glitches in this site.

LTETtrack

Learning, Teaching, and Educational Transformation track

(previously called: "Non-licensure Track in M.Ed." or "Track A")
last update: December 2, 2010

Welcome to new and prospective LTET students.
The description to follow conveys the goals of the track and its openness to a broad vision of education. Upcoming courses may be taken by prospective students as well as those who have matriculated or transferred into the track.
Please take time to read requirements for courses and capstone options -- and for transferring into the track if that's what you're interested in -- so that your interactions with your faculty advisor can be focused on educational more than bureaucratic matters.
Indeed, please bookmark this webpage so you can refer back to it. (If you do not know your faculty advisor, follow the instructions to arrange this -- or to be reminded who the person is.)

Description

The Master's in Education track in Learning, Teaching, and Educational Transformation allows students to pursue diverse inquiries and practical projects building on a foundation in curriculum development, research and writing, and collaborative action for change and social justice through education. Because this track is designed for individuals who do not wish to be certified in Massachusetts (or who are already certified), it helps students work in a broad range of education-related professions including those outside of classroom teaching, such as adult- and community-based education, educational research, policy analysis, philanthropy, and advocacy. With assistance from a faculty advisor, students design a sequence of education-related courses to support their specific interests. The current faculty advisors have special interests and experience in Asian American Studies, ethnic studies, urban studies, curriculum studies, teachers as writers, applied behavior analysis, critical and creative thinking, science in its social context, and education in technology-mediated environments.

GRADUATING STUDENTS please see the new page on the left, "Graduating Students", for important information about graduation procedures.

Upcoming Courses

See WISER for full listing of courses offered by UMB graduate programs. Any of the courses listed as a core course may also be taken as an elective (if not taken as a core course).

Winter 2011
Mediation, Dialogue, and Collaboration
CRCRTH 616 Dialogue Processes

Spring 2011
Here is the new chart for Spring 2011 courses that fulfill core requirements.

Curriculum Organization and Innovation
EDC G 630 K-12 Inclusion
EDC G 652 Applied Behavior Analysis: Basic Principles 2
EDC G 660 Designing Middle and Secondary Curriculum and Learning Strategies
CRCRTH 602 Creative Thinking (online and face-to-face)

Research and Writing for Reflective Practice
EDC G 621 Teaching Writing in the K-12 Classroom
EDC G 689 Teacher Research
EDC G 690 Teacher Research for Professional Licensure*
CRCRTH 692 Processes of Research and Engagement (online*)
CRCRTH 694 Synthesis of Theory and Practice

Mediation, Dialogue, and Collaboration
CRCRTH 616 Dialogue Processes (online)
CRCRTH 618 Creative Thinking, Collaboration, and Organizational Change (online)

Urban and Social Justice Education
EDCG 606 Sociocultural Perspectives on Education

Possible Electives (You are not limited to these courses for electives. These listed represent courses commonly selected by LTET students. Review course offerings and consult with your advisor for additional options.**)**
CRCRTH 650 Mathematical Thinking
CRCRTH 688 Reflective Practice
PHIL 501 Philosophical Thought
WOST-597 Gender, Race and the Complexities of Science and Technology
See CRCRTH courses for more elective options.

- indicates a suitable course for undertaking the paper option for the capstone requirement.

Students graduating in May/June or August should complete their capstone requirement in the spring and submit their application to graduate with commencement fee to the LTET coordinator (via LTET mail slot in W-2-93) at the start of February. Students graduating in December should complete the capstone in the fall and submit their application to graduate in early September.

Course Requirements

Four Core Courses (12cr.)
New (for students matriculating in or after Spring '09 and others if they elect this option)

One in curriculum organization and innovation	e.g., EDC G 642, 630, 660; CrCrTh 601, 602, 630, 640, 645, 652; BWPEDU 510

One in research and writing for reflective practice	e.g., EDCG 621, 654, 689, 690; CrCrTh 611, 692, 693; BWPEDU 501, 530
One in mediation, dialogue, and collaboration	e.g., DisRes 624; CrCrTh 616, 618, 670 (theme: Information Literacy)
One in urban and social justice education	e.g., EDC G 606, 672; CrCrTh 627

The choice of core courses must be recommended by the student's advisor and approved by the Program Director.
(Course descriptions for CrCrTh courses; BWPEDU; EDCG courses, DisRes, see Graduate Bulletin

Old Core (for students who matriculated before Spring '09)

One in curriculum organization and innovation	EDC G 642
One in critical and creative thinking	any CrCrTh course
One in dispute resolution	any DisRes course
One focused on urban education	e.g., EDC G 606, 672

Alternatives to these core courses can be recommended by the student's advisor and must be approved by the Program Director.

Seven additional courses, focused on a specific area of interest (21cr.)
Two upper-level (300- or 400-level) undergraduate courses may be approved by the Program Director to be counted toward this requirement.
Students with specific areas of interest that match another Masters Program or Graduate Certificate listed in the Graduate Bulletin are encouraged to contact that Program for advice and to be assigned an advisor.
Students may transfer credits from a UMass Boston Certificate program into the non-licensure M.Ed. track (subject to the usual condition for transfer credits that the grade must be B or higher). This option is especially relevant for students from the following Certificate programs:

- Applied Behavior Analysis
- Critical & Creative Thinking
- Science in a Changing World
- Teaching Writing in the Schools
- Instructional Technology for Educators.

Downloadable NonlicensureTrackflowsheet.doc to plan courses

Transfer of pre-matriculation credits or credits taken elsewhere
6 graduate credits taken either at UMB before matriculation or elsewhere at any time can be transferred in. The courses must be equivalent to coursework within the LTET program track--If you haven't yet taken the course, it's safest to get prior approval. To get approval, first check with your faculty advisor if you have any questions about whether the course(s) meets the equivalency standard (or requirement). They may ask you to get a copy of the syllabus. Once it's OK with them, get the LTET coordinator's approval (usually by email). Then arrange to get your transcript sent to LTET coordinator, c/o Department of Curriculum o& Instruction, W-2-93, who then submits the necessary form to the registrar. Other

Conditions: A letter grade of 'B' or higher must have been obtained in the course. The course cannot have been applied towards another degree. The course has to have been taken within the past 7 years.

Joining from/with other tracks

See here for more details, but, in brief, you can:

Switch to the LTET track from

- another M.Ed. track
- another graduate Masters of Certificate program

Add LTET while continuing in your existing program

- Linking LTET M.Ed. to Professional Licensure
- Linking LTET M.Ed. to Graduate Certificate Leading to Initial Licensure in Moderate Disabilities

Capstone Options

Students, after consultation with their advisors, choose which option to take and inform the LTET track coordinator.

1. Comprehensive examination

- This option is a take-home essay examination, sent to you by email attachment. Students are given 30 days (from start of April or November) to complete the assigned questions and return them for evaluation by faculty committee. Students complete this during their final semester in the program. The exam currently consists of three questions, which require short essay answers "addressing significant issues in contemporary education and reflecting the study and research each student has carried out in pursuit of the degree." This rubric (LTETCompRubric.doc) shows how your answers will be evaluated. Evaluations will be emailed to you by the date that grades have to be submitted.
- Remind the program coordinator at the start of your final semester that you are taking the comp and confirm your preferred email address for communication about the comp.

2. Written paper with oral presentation.

- This option for the capstone project is an opportunity for students to integrate into their professional lives the ideas and theory, skills and strategies, experiences and collaborations from across their studies and associated activities. Students are invited to combine an essay with "exhibits" from their work during the program. The exhibits can take a variety of forms, such as original curriculum materials, a professional development workshop series, a video case study, a practitioner's portfolio, an implemented teacher inquiry project, other excerpts from coursework, or a proposal for action research. The essays are expected to locate the exhibits in relation to what others have written and done in the relevant area as well as to integrate students' reflections on their own professional practice, changes while studying in the program, and future directions. The forms and length of the essays will depend on the particular nature of the projects. For example, if the exhibit were a 2-4 page action research proposal, an extended essay (20-40 pages) that reviews and critiques literatures appropriate to the research questions would be expected to accompany it; a shorter essay (10-20 pages) would be appropriate to accompany a video case study.
- Students wishing to pursue the option of a written paper with oral presentation for

their capstone project are advised to enroll in a course designed for intensive research and writing appropriate to the forms of the project (e.g., EDCG 689, 690, CrCrTh692, 694). The course instructor and one other LTET faculty member then serve as advisors for the project, but (given that the capstone paper requires something more than the course requirements) this arrangement and the form of the capstone project must be established and approved by the LTET coordinator before the start of the semester in which it is undertaken. Oral presentations before the advisors and peers are arranged toward the end of that semester.

Required form:  LTETcapstoneproposal.rtf

Future Semesters' Course Offerings

(subject to change)

o = online; d = distance option (using Skype to participate in regular class sessions); other courses face-to-face only
Course titles and descriptions are given at http://www.cct.umb.edu/courses.html.

Semester	**Regular CCT track core courses**	**Science in a Changing World core courses**	**Final research & engagement courses**	**Electives** (any course in the other columns not taken as a required course can also be taken as an elective)
	(Fall & Spring non-online courses on Tuesday evenings)		(Fall & Spring non-online 692 & 693 sections on Tuesday evenings)	
Winter 2011				616
Spring 2011	602, 602 (o), Phil 501 (d)	650	692 (o), 694 (d)	616 (o), 618 (o), 630, 688 (d), PPol 753 (d), WoSt597
Summer 2011	601, 655 (subst. for 651)			612 (o), 618, 619 (o)
Fall 2011	601, 601 (o)	652	692 (d), 692 (o), 694 (d)?	612, 618 (o), 630, 670 (o), 688 (d)
Winter 2012				616
Spring 2012	651, 602 (o)	649 (d)	693 (d), 693 (o), 694 (d)	616 (o), 618 (o), 688 (d)
Summer 2012	601 (d)			612 (o), 618, 619 (o)

Fall 2012	601 (o), 602, Phil 501 (d)	640 or 645 (d)	692(o), 694 (d)	618 (o), 627, 670 (o), 688 (d)
Winter 2013				616
Spring 2013	602 (o),	650	692 (d), 693(o), 694 (d)	616 (o), 618 (o), 688 (d), PPol 753 (d), WoSt597
Summer 2013	601, 655 (subst. for 651)			612 (o), 618, 619 (o)
Fall 2013	601 (o), 651	652	692 (o), 693 (d), 694 (d)	618 (o), 630, 670 (o), 688 (d)

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Last update 5 Nov. '10

Student Handbook
Critical & Creative Thinking Program (covering regular CCT studies and the *Science in a Changing World* track)

Table of Contents

The information in this handbook updates and supplements the latest Graduate Bulletin entry for CCT. It is arranged in an order that takes you through the sequence of issues you may have from when you are first interested in the program to when you are ready to complete your studies.
Guidance for students in the Science in the Changing World graduate track is in the process of being written and added. In the meantime, SICW students should read this in conjunction with the webpage for the track.
If you are reading a printed version of this handbook there will be some slightly mysterious text that indicates links on the web-version to material located elsewhere in the handbook.

Search for info within the handbook: Go

Overview of Program

Joining the CCT Program

- Welcome letter to new or prospective students
- Programs of Study
  - Master of Arts, with student-defined specialty areas such as:
    - "creative thinking at work," "gifted and talented education," "critical and creative thinking in literature/arts/music," "dialogue and collaboration in organizational change." Areas of specialization may be constructed through cooperation with other UMass Boston graduate programs, such as Instructional Design, Special Education, Public Policy, and Dispute Resolution; and
    - a distinct Science in a Changing World track with different core courses.
  - Graduate Certificate, which accommodates general studies, as well as

the following targetted themes or foci:
    - Creative Thinking at Work | Science in a Changing World | Gifted and Talented Education

    See also distinct Science in a Changing World track with different core courses.
  - Students may begin with the Certificate and apply to transfer later to the Master's program, or vice versa.
- Scheduled course offerings (see below)
- Taking single courses before applying or matriculating (= registering for a "non-degree course")
- Application Procedures, Info, Tuition & Fees, Graduate Assistantships
- Profiles of CCT Faculty (with rooms & office hours)
- Profiles of Science in a Changing World Faculty
- The Program Coordinator is the faculty member who directs and oversees all aspects of the program, including the Science in a Changing World track. (The Program Coordinator is the same person as the Program Director or GPD = Graduate Program Director.)
- Program Ofice cct@umb.edu, Wheatley Hall, Second Floor, Room 157, University of Massachusetts Boston, 100 Morrissey Boulevard, Boston, MA 02125-3393 (Directions)

Moving along through the programs of study

- Notes for Newly Admitted Students
  - CCT Community Directory | Information Form for CCT Community Directory | Sign up to be able to use CCT and other umb.edu wikis

    Registering for courses | Student advising | Transfer Credit Approval Form for graduate courses taken elsewhere or at UMB before matriculating
- Resources and Assistance:
  - Graduate Assistantships | Student services (ID, online grades, email, etc.) | Facilities
- Course Descriptions, Foundation Courses, Electives, and final Required Courses (with syllabi linked to website)
- Scheduled course offerings
  - Winter/Spring 2011 | Summer 2011 | Fall 2011
  - Future offerings of courses (provisional)
- **Entrance interview** with your general advisor and other faculty members

(before or soon after admission), At this time we encourage you to

- Explore and become familiar with the resources available in the website (http://www.cct.umb.edu), handbook (http://www.cct.umb.edu/handbook.html), and wiki (http://cct.wikispaces.umb.edu)
- Submit provisional plan , for taking courses
- Make your own connections among ideas and experiences from different courses by starting a Reflective Practice/Metacognitive Portfolio, http://cctrpp.wikispaces.umb.edu/
- Participate in monthly CCT Community (aka CCT Network) activities
- Join the social network site (email the program for details) in order to connect with alums and other members of the wider CCT community whose interests you share or are intrigued by
- Take steps to acquire Research and Study Competencies progressively over the course of your studies
- Make use of writing support groups, tutors, coaches, and editors so you can develop and convey your ideas strongly on paper (unless you already do).

- Academic Policies and Procedures (on leave, incompletes, etc.)
  - Program Fee must be paid for students to keep their file active in semesters when they are taking a course. You "register" for this before add/drop date; after then, submit form and check including late fee.
- Forms
- **Mid-program check-in**
  - Two weeks after the end of the semester in which you take their fifth course towards the CCT M.A. you should submit your Reflective Practice/Metacognitive Portfolio thus far and evidence of Research and Study Competencies you have acquired.
    - The CCT faculty will review these and meet with you to make recommendations (which may include suggesting that you put a hold on taking courses in order to finish incompletes and/or spend a semester improving writing skills and acquiring more Research and Study Competencies)
  - A set of steps to prepare CCT students to complete a synthesis during their final semester (or very soon after), including
    - Options and rationale for pre-capstone courses and capstone synthesis.
    - Forms and information related to the steps involved in synthesis projects
  - The Rs of the CCT experience, to help reflect on Your Developing Practice

- Exit self-assessment
- Graduation

Critical & Creative Thinking Graduate Program

using critical and creative thinking to develop reflective practice as we change our schools, workplaces, and lives

(click on the image for the associated page)

- CCT Community event/Open House, December 6, 5.30-9pm
- New Science in a Changing World track for M.A. and Graduate Certificate

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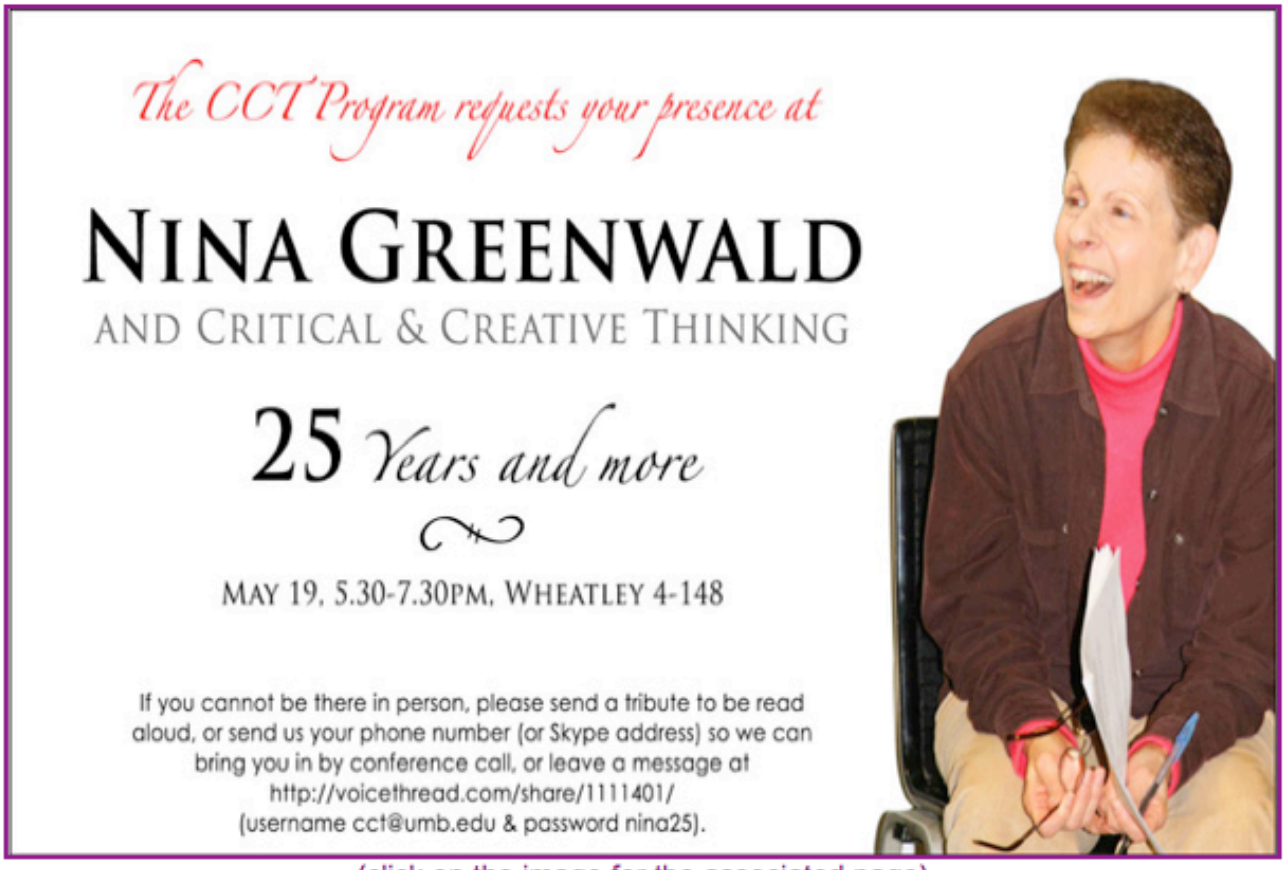
Critical & Creative Thinking Graduate Program

using critical and creative thinking to develop reflective practice as we change our schools, workplaces, and lives



(click on the image for the associated page)

- CCT Community event/Open House, December 6, 5.30-9pm
- New Science in a Changing World track for M.A. and Graduate Certificate

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Overview | Impact | Visiting | Referral | Contact cct@umb.edu
Masters (M.A.) | Certificates | Online & Distance Ed | Courses
Joining -> Moving thru (Handbook) -> Staying involved (Alumni)
Wiki | News | Calendar | Podcasts | Twitter | Tour | Search

College of Education & Human Development

UMASS BOSTON

Dear Incoming or Prospective CCT Student,

Welcome to the Critical and Creative Thinking Program, a unique and innovative inter-disciplinary graduate program offered only at UMass Boston [see overview of the program]. The CCT Handbook provides a step-by-step guide to joining and moving through the Program. The most current information about CCT activities and updates on future semesters' courses can be accessed via the CCT website (www.cct.umb.edu), which has links to a calendar, wiki, and regular news bulletins. Prospective students and others interested in CCT are encouraged to email the Program office to get added to the email distribution list. Please keep us informed of any changes in your email address.

As an interdisciplinary, cross-college program CCT has to be critical and creative in the way it secures its resources and uses them, especially in times of state budgets cuts and shifting institutional priorities. For several years we have worked to build more "horizontal" exchanges and support among students and "vertical" exchanges between students and the larger community of CCT aums and associates. These have coalesced into monthly events of the CCT network and an online social network. Through these you can extend your learning beyond the formal classes by hearing about the range of ways alums, faculty, and students put critical and creative thinking into practice and reflect on how their current work builds on their CCT experiences. Every CCT Network event has time for socializing, but there are also occasional social gatherings organized by the graduate students' group, the CCT Forum.

Each matriculated student is assigned a general CCT advisor, but should feel free to ask other faculty members for advice. We want the time students spend consulting with faculty to focus as much as possible on issues of personal, professional, and intellectual development, so we have designed the web-based handbook to enable students to handle most bureaucratic matters on their own. (Students recently admitted should take note of the guidelines about advising.)

We would also value help getting CCT's website (http://www.cct.umb.edu) linked in appropriate places and any good old word of mouth about CCT would be appreciated. To reach our target of new students each year, we need to reach out and find people who might not have knows we exist but are thrilled when they find us.

Finally, we view the CCT program as works-in-progress, which means that we encourage members of the CCT community to find opportunities to affirm what is working well and to suggest directions for further development. It helps our spirits to know that others are thinking about how the Program can move ahead.

Sincerely,

Peter Taylor, Program Coordinator

Return to home | handbook | search
Last update 23 Aug 2010

Checklist of links for new students to followup on

Welcome letter

Notes for Newly Admitted Students -- please help us help you

Overview of CCT Program

Student handbook -- the essential first stop if ever you have a question as you move through the Program
(pdf version if you want to print a copy)

Course planner-- please submit as soon as possible

CCT online social Network -- request to join via this link

Information for community directory -- please submit as soon as possible

Sign up to be able to use CCT and other umb.edu wikis

Course offerings

Entrance interview
As a student admitted and matriculating in xx we'd like you to schedule an entrance interview on xx, between xx. Let us know if that time period doesn't work.
This will give us a chance to answer any questions about how to get the most from your time in CCT.

> For M.A. students, the entrance interview will give the Program a chance to introduce you to a "set of stepsto prepare CCT students to complete a synthesis during their final semester (or very soon after).

CCT Community events
A start of semester event will continue the series of events under the CCT Network, which "supplements students' education through the involvement of alums and alums' education by their involvement in the education of students and each other."

Research and Study Competencies to develop before the final Required Courses

CCT expects students early in their program of study to develop competencies in the areas below. Make use of self-study guides and workshops to assist your development. Print out and use the left margin to take stock of what you already do well and what your priorities are for next steps.

Computer use

- Open a second email account to keep school work separate from personal and junk emails (e.g., a UMB email account)
- Establish forwarding from your UMB student email account to the email you use.
- Establish a filing system for email and attachments downloaded to your own computer (recommended free software, Eudora)
- Establish a system on your computer of folders/directories and folders/directories inside folders/directories, so that all files are inside folders/directories and can be easily backed up or synchronized
  (Suggestion: Courses; Email; Bibliographic records; Work/Organizations; Correspondence;...)
- Establish a system using flash drives to synchronize files from one computer to the next (doubling as a backup so you are not crushed when your harddrive crashes)
  (Synchronize for MACs, CopyTo for Windows)
- Use of listservs
- Use of bulletin boards
- Use of wikis for collaborative knowledge generation, e.g., CCT wiki
- Use of social network sites
  to extend the experiences that we value in face-to-face and person-to-person interactions and to spark other kinds of generative interactions that hadn't been happening off-line, e.g., CCT Network social network (email request to join and for more information)
- Become familiar with the facilities and professional development opportunities provided by Information Technology
- Install an up-to-date internet browser and set your preferences on it
- Download Acrobat Reader to read PDF files
- Combine the above into a sustainable set of computer-use practices
  (see guide to a virtual office)

Library use and Research

- Get your student ID card and then a library bar code
- Access to electronic course reserves via Electronic reserves
  (path: Electronic reserves and Course Materials | select instructor or course, enter password provided by instructor)
- Access to on-line reference material and internet searching
  via on-line tutorialsor workshops
- Establish a bibliography database for references (recommended software, Endnote, or for free RefWorks)
- Understand that using material you did not write without citing the source is plagiarism and unacceptable.
- Establish a system of files to organize research materials that you have on paper (complementing the electronic filing system).

Writing and Editing

- Arrange peer and/or professional editorial assistance
  (which frees professors to interact with you around your ideas)
- Explore writing assistance if needed
  (e.g., Graduate Writing Center)
- Establish a bibliography database for references (recommended software, Endnote, or for free RefWorks)
- Establish preferred citation style and prepare a guide for yourself to use it consistently
  Citing references, a short guide
- Spelling and grammar check using wordprocessor
- Standard, consistent use of commas and other punctuation
  (use Turabian or other reference to create a checklist beside your computer)
- Formatting using wordprocessor's ruler, table layout, page breaks, indents (minimize use of tabs or spaces!)
- Phases of developing a synthesis project, which are adaptable to any project.

Reflective Practice

- Personal/professional workbook, including notes, journaling, information you want to refer back to
- Reflective Practice (or Metacognitive) Portfolio
- Use of social network sites
  to extend the experiences that we value in face-to-face and person-to-person interactions and to spark other kinds of generative interactions that hadn't been happening off-line, e.g., CCT Network social network (email request to join and for more information)
- Hidden diversity
  ("underlying differences that shape who we are in unique ways...

allow[ing] us the opportunity to contribute to society in very individual and productive ways")

- The Rs of the CCT experience

  (personal, professional, and intellectual development through the CCT Program)

- Process Review option for capstone Synthesis

  If interested start compiling material all through your CCT studies

- Developing as a Reflective Practitioner

  designed for reviewing the synthesis project, but adaptable to any project.

CCTstudentsandothers

Full view

Records: 1879

Found: 4

Unsorted

last name, first name, last update	Doe	Jane		2010.07
address city, state	60 Mission St.		Somerville, MA	
zip or COUNTRY			02145	
home phone, work phone, fax/skype	617-555-1212			
email emailUMB receive email?	cctstudent@gmail.com			Y
status, student #, general CCT advisor	4	012345678	Greenwald	
ethnicity route to CCT u/g GPA	Euro-Am			3.4
date: admit matric grad/wdwl	2007.05	2007.09	2009.12	
CCT601 CCT602 Phil501 Psy550	07sP	07xF	08sP	09sP
Electv 1 Electv 2 Electv 3 Electv 4	07xF(611)	08sP(646)	08xF (612)	
CCT692 CCT693 CCT694	08xF	09sP	09xF	
SICW track 640_5 649 650 652				
MidProgramCheckIn PortfolioURL				
Mid Program Chackin Recommendations				
Synth chair Reader 1 Reader 2	Nina Greenwald	Arthur Millman		
Synth title Area	Steps to an ecology of mind			.THR
Synth abstract Access to synth	This synthesis begins with a series of metalogues, which			
SICW internship info & resources for directory				
notes	7/10 This is a dummy record			
work address				

CCT News

25 November 2010

See also previous news, alum news and exchanges, items for the upcoming news, and CCT calendar.
Inform cct@umb.edu if you have news OR want to be emailed when there's a new news compilation (no more than once/month) OR want to be removed from such mailings.

Contents: Student matters, CCT community, CCT events, alums, other events, opportunities, resources, food for thought, humor

Student Matters

Registration is open for winter and spring 2011 courses. See http://www.cct.umb.edu/courses.html for details and full descriptions.
Winter session courses run from January 3-21. Spring courses start January 24, 2011 (week of Jan. 31st for online courses).

Fall 2010 Marathon Day: Saturday, December 18, in the CCT office W02-093. Come anytime between 10:00am-4:00pm.
Marathon Day is when CCT students complete their required mid-program check-ins, update reflective practice portfolios, focus on finishing Synthesis and other writing, and finish incomplete coursework left over from the semester, with assistance from faculty and other students as needed.
Feel free to bring gift items for swapping--if it's not taken by someone else by the end of the day, it'll go to Good Will

Peter Taylor asks that anyone planning to apply for his Gender & Science PBL course let him know what other days and times is it possible for you to attend the class. (The co-instructor is hoping to find a time different from 5-8pm Thursdays.)

CCT Community

Peter Taylor's blog continues, with (so far) daily entries on critical thinking and reflective practice in environment, biomedicine, and social change.

CCT Events

CCT Community Open House
Fall 2010 Student Presentations - Synthesis and Reflective Practice students
Monday, December 6, 2010; 6- 9pm
Wheatley W01-0019. Email cct@umb.edu to RSVP and for additional details.
Join us and hear about the work of students completing their Synthesis and Reflective Practice projects.
Feel free to bring gift items for swapping--if it's not taken by someone else by the end of the evening, you can take it home or we can keep it for Marathon Day

Alum and CCT associates Notes

Events

Luanne Witkowski's show about environmental installation as sketchbook, November 3 - 28, 2010
KINGSTON GALLERY, 450 Harrison Ave., Boston, MA 02118, Wed – Sun 12 – 5 pm; and by appointment
Directions and more information, see: http://www.kingstongallery.com

The 9th Annual Boston Latino International Film Festival, Dec. 2-5, 2010, http://www.bliff.org/ (Luz Valdez, CCT alum AND filmmaker is helping to organize this.)

Take the ultimate intelligence test to help researchers "looking for the smallest number of tests that could cover the broadest range of cognitive skills that are believed to contribute to intelligence, from memory to planning," http://www.newscientist.com/article/dn19592

Conference on Creative Education (CCE 2011) will be held from April 8 to 10, 2011 in Wuhan, China, www.creativedu.org/2011

ELEVENTH INTERNATIONAL CONFERENCE ON DIVERSITY IN ORGANISATIONS, COMMUNITIES AND NATIONS
University of the Western Cape, Cape Town, South Africa, 20-22 June 2011
http://www.Diversity-Conference.com

Venture: Northeastern was part of Global Entrepreneurship Week activities on campus in mid-November. Sponsored by the School of Technology Entrepreneurship at Northeastern University and the National Collegiate Inventors and Innovators Alliance (NCIIA).

Opportunities

Call for Proposals: "Collections and Collaborations," International Interdisciplinary Graduate Student Conference (Indiana University - Bloomington from March 24th - 26th, 2011, hosted by the graduate students of the IU Department of English)
We encourage proposals for individual papers as well as panel proposals organized by topic. In the past, this conference has bridged the "critical" and "creative," and we intend to host both critical and creative panels. Please submit (both as an attachment AND in the body of the email) an abstract of no more than 250 words along with a few personal details (name, institutional affiliation, degree level, email, and phone number) by Jan. 15th, 2011 to iugradconference@gmail.com (http://www.indiana.edu/~engsac/conference/)
We hope to receive papers from a variety of disciplines, employing any number of methodologies and considering any time period. Below are some suggestions for possible topics. This list is by no means exhaustive; rather, we hope these ideas might inspire some exciting new thoughts related to the theme - see http://www.indiana.edu/~engsac/conference/cfp.html

Resources

CCT was "unique," but we've learned that there is another critical & creative thinking program... or at least a course in a graduate program (online) from Melbourne, Australia (Peter Taylor's homeplace), http://www.capa.edu.au/roadshows/CriticalandCreativeThinking

A compilation of forms of diagrams
http://www.cems.uwe.ac.uk/xmldb/rest/db/Visualization/editTag.xql?username=chriswallace&tag=spatial

and a most simple example

Food for Thought

Interviewed on the BBC a year or so before his death, [Harold] Pinter was accused of being overly pessimistic about life and politics. He replied... with a line that could stand as his motto: “Life is beautiful but the world is hell.” source

Public workers and perceptions:

http://www.labornotes.org/2010/10/convenient-scapegoats-teachers-firefighters-parks-workers-all-public-workers

Interview with Noam Chomsky for Platypus Review , to discuss the history of the Left and the state of radical politics today.

The Hermitary: a response to the constant connectivity experienced in the modern world

Humor

On blogging, etc. http://xkcd.com/386/

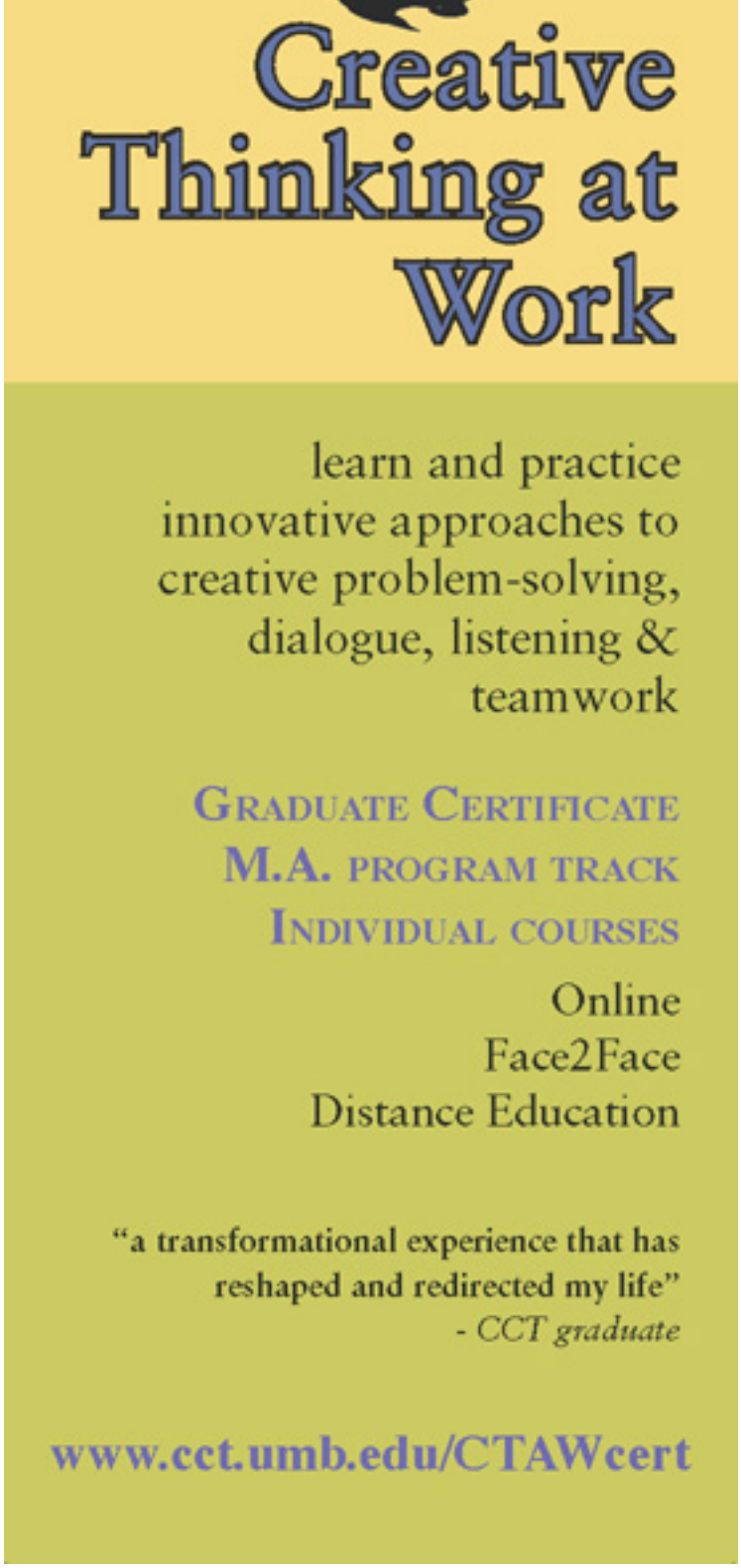
Sometimes a solution comes from an unexpected approach: http://www.youtube.com/watch?v=jJHrHQMPFVQ&NR=1

From http://www.newscientist.com/article/mg20827862.600-feedback-a-most-prolific-falsehood.html
[This disclaimer] "came with the manual for the solar-powered house-number panel bought by Matthew Hilder in Wentworth Falls, New South Wales, Australia. 'Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.'"

Know someone who thinks they walk on water?

Creative Thinking at Work

This 15 credit graduate certificate in Critical and Creative Thinking trains people to tackle challenging real-life problems, generate new ideas, and take them through to realization in their various educational, professional, artistic, and social settings. Innovative and inspiring teachers introduce a variety of approaches to invention, dialogue, listening, and teamwork that promote creativity. Certificate students learn to confront ambiguous and complex problems, reflect deeply and bring insights to the surface, transform the giving of feedback into a mutual learning experience, build relationships of trust and enthusiastic acceptance of diverse perspectives, articulate a practical vision, and collaborate in bringing it to fruition.
CCT Certificate students take CrCrTh 601 and CrCrTh 602, three other courses, and complete an exit performance as part of one of the courses taken.
CCT Masters students, graduate students from other programs, advanced undergraduates, and special students are welcome to enroll in individual courses. (CCT Masters students need permission of their advisors to take on-line sections and may count no more than five on-line courses from UMass Boston towards their degree.)
This certificate is offered through a



partnership between the Graduate Program in Critical & Creative Thinking and Continuing Education.

Courses

For timing and frequency of course offerings, see upcoming semesters' schedulesand provisional longer-term plan.
F2F = face-to-face sections; OL = online sections; F2FD = distance ed option to join in face-to-face sections

Required courses

CrCrTh 601 Critical Thinking, F2F, OL
CrCrTh 602 Creative Thinking, F2F, OL

Electives

CrCrTh 611 Seminar in Critical Thinking (Problem-based learning focus)
CrCrTh 612 Seminar in Creativity (focus varies), F2F, OL
CrCrTh 616 Dialogue Processes, F2F, OL
CrCrTh 618 Creative Thinking, Collaboration and Organizational Change, F2F, OL
CrCrTh 630 Creativity in the Literature and Arts, F2F

Additional courses in which

to undertake exit performance

CrCrTh 692 Processes of Research and Engagement, F2F, F2FD
CrCrTh 693 Action Research for Educational, Professional and Personal Change, F2F, F2FD

For more information, please contact the Program Office, email cct@umb.edu, or view the CCT Program handbook.

University College

UMASS BOSTON

Creative Thinking at Work

Critical and Creative Thinking

AVAILABLE ONLINE

This 15 credit graduate certificate in Critical and Creative Thinking trains people to tackle challenging real-life problems, generate new ideas, and take them through to realization in their various educational, professional, artistic, and social settings.

A variety of approaches are introduced to invention, dialogue, listening, and teamwork that promote creativity. Certificate students learn to confront ambiguous and complex problems, reflect deeply and bring insights to the surface, transform the giving of feedback into a mutual learning experience, build relationships of trust and enthusiastic acceptance of diverse perspectives, articulate a practical vision, and collaborate in bringing it to fruition.

CCT Certificate students take two core courses, three elective courses, and complete an exit project as part of one of the courses taken.

CCT Masters students, graduate students from other programs, advanced undergraduates, and special students are welcome to enroll in individual courses.

About the program

- Introduction
- Courses
- Admission
- Faculty
- Contact us

Related Program

The CCT program is now offering courses at the Cape Cod Community College Hyannis Center, leading toward the 15-credit CCT graduate certificate.

Click here for more information.

More Information

Courses may be taken online or face-to-face, through UC or regular UMass Boston offerings.

Also be sure to visit the CCT website for additional info on

On-line Critical and Creative Thinking courses & Distance Ed

Registering: Online courses are regular, for-credit courses, but they are hosted by the University College (formerly Division of Corporate, Continuing, and Distance Education). **NOTE to ONLINE STUDENTS**: You need a UMass student email to access the platform for online courses. Many things about how the course operates and how to get technical help become much clearer once you register - the instructor will make contact with you before the course starts, since you cannot access the course itself until the term starts. After your admittance to the program, or after registering for a course the first time, you will be sent information about your Student ID and Student Email Address (typically by postal letter). Make sure to read any related materials clearly, as both of these pieces of information will be needed to access various online systems at UMass-Boston. Read the full guide on Getting Started for Students of Online Courses for lots of other information, arranged in systematic steps.

While you are waiting to get an UMass email address, email the instructor to make contact and join in activities that do not depend on Blackboard (the system for managing online courses). The instructors' email addresses are listed on the faculty page.

Matriculated M.A. students MUST get the permission of the Program coordinator to take on-line versions of courses that are also offered face-to-face. We want our M.A. students to be part of the face to face community and permission will be granted only if the face-to-face sections have filled above their minimum required enrollment.

Distance Ed: Some of CCT's face2face courses are designed to bring in a small number of students from a distance by skype or speakerphone during regular class meeting times. (Contact the Program for details and the Program Director for approval.) It is therefore possible to complete the entire M.A. at a distance by: undertaking the Certificate through online and distance courses; getting approval to transfer to the M.A. program; and participating in the remaining regular classes at a distance.

Online courses

Most online sections are offered one semester each year, as indicated below, but see

the multi-year schedule for future semesters.
The emphasis of each online section is given by the tagline plus descriptions linked to the course numbers.

CrCrTh 601: Critical Thinking (fall)

Instructor: Bob Schoenberg
Tagline: Applying critical thinking skills in one's professional life.
Comments from students, Fall 2004

CrCrTh 602: Creative Thinking (spring)

Instructors: Delores Gallo and Luanne Witkowski
Tagline: Inside the Creative Process: Exploring Blocks and Finding Creative Ground
2010 online evaluations

CrCrTh 612: Seminar in Creativity (summer)

Instructor: Suzanne Clark

CrCrTh 616: Dialogue Processes (spring)

Instructor: Olen Gunnlaugson
Tagline: Exploring the Transformative Practices of Dialogue in Learning Communities & Organizations

CrCrTh 618: Creative Thinking, Collaboration, and Organizational Change (section 1)

Instructor: Allyn Bradford
Tagline: Build a sense of trust, teamwork and accomplishment as class members work together on a variety of creative endeavors in virtual space.

CrCrTh 618: Creative Thinking, Collaboration and Organizational Change (section 2)

Instructor: Wally Clausen
Tagline: Theories and Tools for Creative Change in Organizations, Communities and the World
2010 evaluations (Clausen)

CrCrTh 619: Biomedical Ethics (summer)

Instructor: Mark Robinson
2010 evaluations

CrCrTh 670: Thinking, Learning and Computers (fall)

Instructor: Jeremy Szteiter
Tagline: Critical Thinking & Information Literacy
2009 evaluations

CrCrTh 693: Action Research for Educational, Professional, and Personal Change

Instructor: Jeremy Szteiter

CRCRTH 692: Processes of Research and Engagement

Instructor: Jeremy Szteiter or Peter Taylor
2010 evaluations (Szteiter)

Case- or problem-based learning

begins from a **Scenario** in which the problems are not well defined, e.g., (from a biology-in-society course) http://cct.wikispaces.umb.edu/645embryo

Students brainstorm so as to identify a range of problems related to the scenario and choose which of these they want to investigate and report back on. The problem-definitions may evolve as students investigate and exchange findings with peers. If the scenario is written well, most of the problems defined and investigated by the students will relate to the subject being taught, but instructors have to accept some "curve balls" in return for a) student engagement in self-invented inquiry, e.g., http://cct.wikispaces.umb.edu/645IVFIncBriefingJC

b) content coverage by the class as a whole, e.g., http://www.faculty.umb.edu/pjt/749-05PBLbriefings.html
and
c) increased motivation for subsequent, more-focused inquiry (see “inverted pedagogy” below), e.g., the student who produced http://www.faculty.umb.edu/pjt/749-05PBLJC1.doc in response to the scenario in b), went on to complete a term paper reviewing citizen-based governance of science, which is under revision for a Science Studies journal. She went on to participate in the Public Impact Campaign associated with the "Unnatural Causes" health disparities project. (This student was a college-librarian with no prior science background.)

Interdisciplinary Coaching In the case-based learning, the instructors facilitate the brainstorming and student-to-student exchange and support, coach the students in their individual tasks, and serve as resource persons by providing contacts and reading suggestions drawn from their longstanding interdisciplinary work and experience.

Inverted pedagogy The experience of case-based learning is expected to motivate students to identify and pursue the disciplinary learning and disciplined inquiry they need to achieve the competency and impact they desire (This inverts the conventional curriculum in which command of fundamentals is a prerequisite for application of our learning to real cases.) E.g., the same student as above is taking a course in social epidemiology for non-specialists.

KAQ framework for inquiry and exchange, http://cct.wikispaces.umb.edu/FrameworkForExchanges
By linking Knowledge and Action, this framework promotes the emphasis of one strand of science and technology studies since the early 1980s on

examining what it takes in practice to establish knowledge or make technology reliable.

Internet facilitation The internet makes it easier to explore strands of inquiry beyond any well-packaged sequence of canonical readings, make rapid connections with experts and other informants, and develop evolving archives of materials and resources (e.g., presentations to the class, new cases, annotated bibliographies) that can be built on by future classes and others (see http://sicw.wikispaces.umb.edu/grst).

GRSTbiblio

Gender, Race, and the Complexities of Science and Technology
Main wikipage for the course

Bibliography, with links to Annotations

Guidelines & Instructions
Insert citations in alphabetical order by first author under the heading below, "General Bibliography."
Include keywords in brackets after the reference.
Contribute annotations by linking the citation to a wikipage name GRSTyyzz, where yy is the first author's name and zz is the year, then adding the annotation into that wikipage.
Annotations should convey the article's key points as well as its connection to the student's own inquiries and interests.
Guidelines about joining the sicw wikispace and for a link to a place to practice (a "sandbox").

example
McNeal, A. (n.d.) How to Read a Scientific Research Paper--a four-step guide for students and for faculty. Retrieved on August 23, 2007 from http://helios.hampshire.edu/~apmNS/design/RESOURCES/HOW_READ.html
[Tips_for_Students]

Keywords
(To enable searches of this bibliography, select keywords from this list and list them in brackets after the reference. Feel free to add keywords to this list--in alphabetical order.)
A: action_research, art_science, abortion, ancestry
B: "bad"_science, biology, black_women, bioethics, black_bodies_in_medical_experimentation
C: colonialism, culture_of_science, cultural_reconstruction, commodification, cultural_science, critical_analysis_of_the_history_of_technology_and_science
E: education, eugenics
F: feminist_perspectives
G: gmo_critique, gendered_technology, genome_phenome, genetic_testing, global_impacts_of_technology
H: human_animal, historical_examination_of_the_intersection_of_race_and_sexuality
I: industrial_influences
L: linguistics, literacy
M: multicultural_interpretations, music technology, medical_industrial_complex, musical_technolgy, Medical_sociology
N: nonhuman_communication, nature_nurture
O: objectivity_strong
P: personal_genomics, privacy
R: race, representation, reproduction, reproduction_politics, race_&_reproduction, reflexivity_strong
S: science_and_morality, science_and_politics, scientific_ethics, scientific_objectivity_subjectivity, science-as-power, STS, STS_History, science_literacy, scientist_activist, social_change, scientific_racism, scientists_in_media
T: technototemism, Tips_for_Students, technical_politics, technology_and_classical_music, technology_and_culture
W: women_knowledge, women_in_academia, women_in_science

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Courses offered in previous semesters

Note: Current faculty profiles and course descriptions may be more helpful than out-of-date or inactive links from the pages to follow.

Winter and Spring 2010
Fall 2009
Summer 09
Winter and Spring 2009
Fall 2008
Summer 08
Winter and Spring 2008
Fall 2007
Summer 2007
Winter and Spring 2007
Fall 2006
Summer 2006
Winter and Spring 2006
Fall 2005
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Summer 1997
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Winter 1997
Fall 1996

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Last update 6 June 10

Profiles of CCT Teachers and Advisors

Core faculty, Science in a Changing World track faculty, Program Assistants, Part-time faculty, and Associates from other Departments are important members of the CCT Community. Here are their profiles, contact info, office hours, and links to syllabi.

Core faculty

Lawrence Blum (Professor of Philosophy and Distinguished Professor of Liberal Arts and Education) has written two books in moral philosophy (Friendship, Altruism, and Morality; and Moral Perception and Particularity), dealing with issues of compassion, friendship, moral motivation, moral development, community, and morality during the Holocaust. Currently he works in race studies and multicultural education, especially the moral dimension of those areas, and is the author of the prize-winning 2002 book, "I'm Not a Racist, But...": The Moral Quandary of Race. Larry teaches "Issues and Controversies in Antiracist and Multicultural Education" (CCT 627) and has given workshops on antiracist education to K-12 teachers in a variety of settings.
CV
Phone: 617-287-6532
Email: lawrence.blum at umb.edu
Office: W-5-012
Office hours:
CCT courses (with links to syllabi): CCT 627

Nina Greenwald (Senior Lecturer, CCT Program) is an educational consultant, national teacher trainer and keynote speaker with specializations in critical and creative thinking, problem-based learning, multiple intelligences, and gifted education. An elected member of the Danforth Associates of New England, an organization of selected higher education faculty distinguished for excellence in teaching, she has taught courses in creative thinking, critical thinking, and humor for the program for over a decade. Her publications include articles on teaching thinking and problem-based learning (PBL), teaching gifted children, and teaching thinking through multiple intelligences. She is former director of K-8 programs to develop critical and creative thinking for a Massachusetts educational collaborative, and an advisor to the exhibits department of the Museum of Science, Boston, on the development of innovative exhibits that engage visitors in thinking and problem solving. Nina is a founding member and past president of The Massachusetts Association for Advancement of Individual Potential (MA/AIP), an advocacy organization in behalf of gifted education.

Her published articles include instructional models for teaching thinking and curriculum for gifted students. Curriculum publications include those which promote thinking and problem solving in science for the Massachusetts Society for Medical Research, The National Institute of Health, The American Medical Association,The New England Aquarium, and NOVA. She is co-author of a chapter on cultural impediments to creative development in Fostering Creativity in Children, Allyn and Bacon, 2001. Her book, Science in Progress, containing authentic issues and dilemmas in biomedical science, and a PBL model for guiding students in the use of this material, has been adopted by the Pennsylvania State Department of Education

as a basis for promoting instructional reforms in science education. Currently, she is collaborating on a new book focused on concept-based teaching of biology with two colleagues from the University of Wisconsin, Madison.
CV

Phone: 617-287-6523
Email: nlgreenwald at Comcast.net
Office: W-2-142-03
Office Hours: Tuesdays 1:30-3:30 (when teaching)
CCT courses (with links to syllabi): CCT602

Arthur Millman (Associate Professor of Philosophy) teaches in the Philosophy Department as well as in the CCT Program. For CCT, he regularly teaches "Critical Thinking" (CCT 601) as well as "Foundations of Philosophical Thought" (Phil 501). He is in the process of developing a new course that explores recent developments and controversies and relates critical and creative thinking to applied and professional ethics. Arthur's research is in both the philosophy of science and applied ethics, and he has worked to help students with the integration and application of critical and creative thinking in a wide range of areas including elementary and secondary education and business.
CV

Phone: 617-287-6538
Email: arthur.millman at umb.edu
Office: W-5-020
Office hours
CCT courses (with links to syllabi): Phil 501, | CCT601, | CCT694

Carol Smith (Professor of Psychology)
I joined the Critical and Creative Thinking Program in 1980, when I was hired as an assistant professor in Psychology who would participate in the CCT program. Over the years, I have taught several courses in CCT: Advanced Cognitive Psychology (Psych 550/CCT651) a required course in the CCT Program; Children and Science course (CCT 652) a specialty course in the science track of CCT, and the Seminar on Scientific thinking (another specialty course in the science track of CCT co-taught in the past with Prof. Arthur Millman in the Philosophy Department.)
My research focuses on characterizing student intuitive theories (in particular, student matter theories and epistemologies of science) and understanding the dynamics of conceptual change both in children and adults. My research with children has examined the role of models, analogies, and metaconceptual understanding in facilitating the process of conceptual change within schooling contexts as well as the general impact of schooling on metacognitive development. I have also collaborated with Arthur Millman in the Philosophy Department in doing a case study of the reasoning processes used by Darwin in the development of his theory of natural selection, based on an analysis of his scientific notebooks.
Most recently, I have worked on several teams (sponsored by the National Research Council of the National Academy of Science) that are developing and exploring the idea of organizing K-12 science standards, instruction and assessments around long-term learning progressions in particular domains-most specifically a long-term learning progression for understanding matter and the atomic molecular theory. I view learning progressions as hypotheses about how knowledge can evolve, given key instructional experiences, from the initial ideas students have in preschool (lower anchor) to the ideas of modern science that are the target of instruction (upper anchor). These hypotheses are constrained by prior cognitive developmental research on children's initial conceptions and our understanding of processes of conceptual change; they are also actively tested through long- term teaching studies, such as the one I am currently working on with researchers and developers from TERC who are working with students in grade 3-5. I also served on the NRC's Committee on Science

Learning, K-8, which authored Taking Science to School-a book synthesizing current developmental, learning, and instructional research that informs K-8 science education. A central argument of that book is that enhancing students' understanding of science involves weaving together four "strands" of development: developing students' knowledge, use, and interpretation of scientific explanations, developing students' abilities to generate and evaluate scientific evidence and explanations, developing students' understanding of the nature of scientific knowledge and how it develops, and developing students' ability to participate productively in scientific practices and discourse. Further, promoting these developments requires careful attention to critical and creative thinking, reflection, and student, voice, motivation and identity.

In my work with CCT and M.Ed. students, I have taught them how to devise and analyze clinical interviews in order to assess student thinking and conceptual understanding. I have also worked with them in creating curriculum interventions that would enhance both students' domain specific knowledge and their metacognitive understandings of how knowledge is created and justified in science.

CV

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Office: McC 4-265

Office Hours:

CCT courses (with links to syllabi): Psych550/CCT 651 | CCT 652 | CCT694

Peter Taylor (Professor, CCT Program) I joined the Critical and Creative Thinking (CCT) Program in the Graduate College of Education (now College of Ed & Human Development) at UMass Boston in the fall of 1998 and continue to enjoy new challenges teaching experienced educators, other mid-career professionals, and prospective K-12 teachers (see blog). Working in the CCT Program also provides opportunities to promote reflective practice in ways that extend my contributions to ecology and environmental studies (ES) and social studies of science and technology (STS). In those fields I focus on the complexity of, respectively, ecological or environmental situations and the social situations in which the environmental research is undertaken. Both kinds of situation, I argue, can be characterized in terms of "intersecting processes" that cut across scales, involve heterogeneous components, and develop over time. These cannot be understood from an outside view; instead positions of engagement must be taken within the complexity. Knowledge production needs to be linked with planning for action and action itself in an ongoing process so that knowledge, plans, and action can be continually reassessed in response to developments -- predicted and surprising alike. In this spirit, ES, STS, and critical pedagogy/reflective practice have come together for me in a project of stimulating researchers to self-consciously examine the complexity of their social situatedness so

as to change the ways they address the complexity of ecological and socio-environmental situations. (See my book Unruly Complexity: Ecology, Interpretation, Engagement, U. Chicago Press, 2005, and Intersecting Processes blog.) Recently, I have begun to take these interests in a new direction through historical and sociological analysis of social epidemiological approaches that address the intersections of environment, health, and development. Through collaborations in and beyond the College of Ed.* I also seek to promote a vision of critical science and environmental education that extends from improving the teaching of scientific concepts and methods to involving citizens in community-based research. (* See Program in Science, Technology & Values, Intercollege faculty Seminar in Science and Humanities, New England Workshop on Science and Social Change, Science Changes twitter, Intersecting Processes blog)

This project had its beginnings in environmental and social activism in Australia which led to studies and research in ecology and agriculture. I moved to the United States to undertake doctoral studies in ecology (Harvard 1985), with a minor focus in STS. Subsequently I combined scientific investigations with interpretive inquiries from the different disciplines that make up STS (working, among other places, at U. C. Berkeley and Cornell), my goal being to make STS perspectives relevant to life and environmental students and scientists. (This is evident in my contributions to a book I co-edited, Changing Life: Genomes, Ecologies, Bodies, Commodities, U. Minnesota Press, 1997.) Critical thinking and critical pedagogy became central to my intellectual and professional project as I encouraged students and researchers to contrast the paths taken in science, society, education with other paths that might be taken, and to foster their acting upon the insights gained. (In 2009, I received the Chancellor's Award for Distinguished teaching.) Bringing critical analysis of science to bear on the practice and applications of science has not been well developed or supported institutionally, and so I continue to contribute actively, to new collaborations, programs, and other activities, new directions for existing programs, and collegial interactions across disciplines (see review).

CV

Phone: 617-287-7636
Email: peter.taylor at umb.edu
Office: W-2-157
Office hours: by signup, or by arrangement
CCT courses (with links to syllabi): CCT649 (PPol 749) CCT692 | CCT694 | CCT693 | CCT640 | CCT645
Website: www.faculty.umb.edu/peter_taylor/

Science in a Changing World faculty

CCT core faculty:

Nina Greenwald
Arthur Millman
Carol Smith
Peter Taylor(track coordinator)

plus:
Arthur Eisenkraft, PhD, New York University (Center for Math & Science in Context; science education, especially active physics)
Dr. Eisenkraft's research interests include development and evaluation of curriculum, assessing technological literacy, new models of distance learning, transfer of learning, problem based learning models, pedagogical content knowledge, integrating science and sports, and how to bring quality science instruction to all students including those from traditionally under-represented minorities. He is Director of the Center of Science and Mathematics in Context (COSMIC). (www.cosmic.umb.edu)
Website
Email: Arthur.Eisenkraft at umb.edu

Fadia Harik (Teacher Ed. program /Math Department; mathematics education;

instructor of CCT650)
She has spent years teaching mathematics to a wide variety of students from engineering students, to prospective elementary teachers. She has also spent a lifetime teaching and developing teacher education programs for prospective and in-service teachers. Among the projects/grants she has led and/or participated in are: Seeing Mathematics project at the Concord Consortium; Telementoring Teachers in Math and Science project at Boston College; Mathematical Inquiry Through Video Cases at Bolt Beranek & Newmann. Harik has authored articles and book chapters on constructivist practice, fostering inquiry in mathematics classrooms, and dynamic explorations of geometry and algebra. Her interests have continually been on ways to unravel the processes of inquiry as well as the obstacles to inquiry in the mathematics classroom at the middle, secondary and collegePhone: 617-287-7355
Email: fadia.harik at umb.edu
Office: W-2-092

CCT courses: CRCRTH 650

Rachel Skvirsky (Biology Department; biology in a social context, especially genetics and molecular biology). At the undergraduate level, she teaches Genetics, a course that covers classical, bacterial, and molecular genetics and Biology of Human Disease for non-science majors. At the graduate level, she teaches Molecular Genetics of Bacteria and direct graduate research. In the summer, she teaches Cell Biology and Genetics—A Human Approach to middle and high school teachers through the NSF-sponsored Boston Science Partnership. This course emphasizes science content, while modeling hands-on, inquiry-based teaching strategies. In addition to teaching genetics and cell biology at various levels, she is interested in providing research experiences for undergraduates, maximizing student diversity in the sciences, and pursuing aspects of science education and pedagogy.
Website
E-mail: rachel.skvirsky at umb.edu

Rob Stevenson (Biology Department; citizen science; technological change, values & institutions)
Research in his laboratory focuses on physiological ecology applied to conservation biology and on biodiversity informatics for citizen science. The physiological work is centered on biomechanics and energetics in butterflies and hawkmoths. Studies currently underway range from behavioral observations on feeding and time budgets to developing instrumentation to record flight patterns in the field. This conservation physiology framework is specifically being applied to migratory butterflies. The informatics work, in conjuction with Robert Morris in Computer Science, focuses on the construction of Electronic Field Guides (see http://efg.cs.umb.edu/). They are producing prototype guides, constructing and testing keys, and making field observations using new GPS and PDA tools.
Website
E-mail: robert.stevenson at umb.edu

Bala Sundaram (Physics Department) has research interests that include Quantum and Classical Chaos, the Quantum-to-Classical Transition and Applications of Nonlinear Dynamics in Biology and Cognitive Science.
Website

Email: bala.sundaram at umb.edu
Phone: 617 287 6055

Brian White (Biology Department)
has interests in Biology Education, and in Educational Software and Multimedia.
Phone: 617-287-6630
Email: brian.white at umb.edu
Website: www.faculty.umb.edu/brian_white/

Program Assistants

Jeremy Szteiter (CCT Assistant Coordinator and instructor CCT 601 (summer), CCT688, online CCT670, CCT692, and CCT693)
is a 2009 graduate of the CCT program. His work has centered around community-based and adult education and has involved managing, developing, and teaching programs to lifelong learners, with an emphasis on a learning process that involves the teaching of others what has been learned and supporting the growth of individuals to become teachers of what they know. He currently serves as the Assistant

Coordinator in the Critical and Creative Thinking graduate program at UMass Boston, where he is the instructor for multiple online courses and helps to organize the CCT Network events. These events support the lifelong learning of the Critical and Creative Thinking community by joining alumni with current students and faculty for shared experiences that push learning beyond the formal studies.

Other recent projects include developing, teaching, and managing technology education programs for community-based organizations, and consulting on instructional design and curricula for continuing education programs in healthcare and university leadership. Stemming from an undergraduate study in Cognitive Science (Carnegie Mellon University) and his graduate CCT work at UMass Boston, Jeremy has further developed a strong focus on issues connecting learning to the contemporary digital age, through experiences ranging from Internet entrepreneurship and culture to applications of artificial intelligence. Other interests include applied theater, philosophy of film, hiking, and music.

Email: Jeremy.Szteiter at umb.edu
CCT courses (with links to syllabi): CCT670 (online) | CCT688 | CCT692 (online) | CCT693 (online)

Felicia M. Sullivan (SICW Assistant Coordinator)
is a community media and technology advocate, educator and researcher. With an MA in Media Studies, a MS in Public Policy, and over 20 years of community-based practice, she works with community media & technology centers as well as social justice and arts organizations to bring the power of communication, media and information technologies to communities. She is currently working towards her PhD in Public Policy at the John W. McCormack Graduate School at the University of Massachusetts Boston and teaches regularly in the University's College of Public and Community Service's Community Studies program. She is currently working methods to integrate inquiry-based learning into the online learning environment.

Felicia is the first graduate of the SICW graduate certificate program where she was able to combine her interests in information and communication technologies with methods for community engagement in scientific education and policy development. She hopes to bring her emerging interests in self-organizing systems and networked systems to the SICW program.
Other Current Research Interests:
* The social impact of science and technology development
* Institutional design and the links to political participation
* Human development and organizational learning
* Organizational development in nonprofit settings
Website
Email: felicia.sullivan at umb.edu

Part-time faculty

Allyn Bradford (part-time instructor of CCT616 and 618 online, CCT Program) regularly teaches CCT616, Dialogue Processes, through Continuing Education and the Teamwork part of CCT618, Creative Thinking, Collaboration, and Organizational Change (plus the whole course on-line).

Allyn has a strong background in organizational and human resource development. A Congregational Minister for 12 years, he worked at Synectics Inc. for 6, and then became an Independent Consultant and Trainer. In addition, he is currently teaching at both the college and graduate levels, using a highly innovative approach which makes extensive use of group process and action learning.

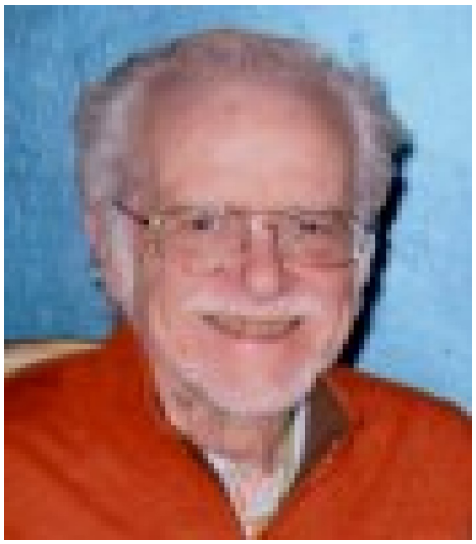
Among the education centers where he has designed and conducted training are the American Management Association, the American Society of Training Directors, the Association of Field Service Managers, the Mecuri Institute in Sweden and the

Accelerated Management Institute in England.

In the private sector he has designed and conducted training for such companies as Block Drug, General Foods, Avon Products, Honeywell, Digital, Stop & Shop, Johnson & Johnson, Warner Lambert, Monsanto, New England Electric, Telex, Fidelity Trust, Kodak, New England Nuclear, Burger King, FW Faxon, Becton Dickenson, Semicon, The First Years and Matritech.

In the public sector he has designed and conducted training for the Personnel Commission of the State of Idaho, the Massachusetts Rehabilitation Commission, the Office of Personnel Services of the United Nations, the Boston Neighborhood Development and Employment Agency, and Massachusetts Half-Way Houses, Inc. Publications: He is the author of "Freedom of Information Changes the Rules" published in the Journal of Management Consulting,"Team Communications" in the Honeywell USMG Mgr. "Suspending Judgement: How to Build Teams Through Critical and Creative Thinking" in The New England Non-Profit Quarterly Journal, "Modern Art and Modern Organizations" in Context, an on-line publication and co-author of Transactional Awareness, a book published by Addison-Wesley.

Allyn teaches Leadership and Management and Effective Team Building at Wentworth Institute of Technology and Dialogue at U-Mass, Boston and the Cambridge Center for Adult Education.
Email: allynb at aol.com
CCT courses (with links to syllabi): CCT616 | CCT618 (online)



Suzanne Clark Associate Professor, Berklee College of Music
* B.M., Berklee College of Music
* M.A., University of Massachusetts
* Acoustic bass player
* Coleader of the jazz duo Trillium with guitarist Pat Drain
* Member, Stambandet

* Performances with Corey Eisenberg, Mickey Julian, Suzanna Sifter, Klaus Suonsaari, and Frank Texiera
* Recordings include "All the Nights Magic" with Pat Drain, and "Nordic Voices" and "Red Wine and Strawberries" with Stambandet, conducted by Allen LeVines
From her Berklee faculty bio:"I'm teaching a course called the Creative Flame. I developed it because I felt a class like this would have been helpful for me as an undergraduate-to learn what it means to be a creative artist and how to work at a creative process. These issues go hand in hand with technical skill. There are external components to your craft and there are internal components. You need a mixture of both, in my opinion, not just to be successful, but to sustain that success."
Email: Suzanne.clark at umb.edu
CCT courses (with links to syllabi): CCT612 (online)

Wally Clausen (part-time online instructor of CCT618)
has been an Independent Facilitative Consultant, Clausen Associates, Weston, Massachusetts, since 196.7
Practices include assessment, research and planning (including surveys, culture studies, needs analyses, and interim reviews or evaluations of change projects); strategic planning and team building, including process design and the facilitation of planning meetings; programs for self-assessment, feedback and training; and systems work in organizational and community planning, management and related areas. Public and nonprofit clients have included Federal agencies (US Fish and Wildlife Service, Customs Service, Departments of Education and Commerce, military agencies, and others), state and local agencies (Massachusetts State Departments of Education, Public Welfare and Public Health; Quincy Public Schools; and others), and associations such as American Baptist Churches and the Massachusetts Municipal Wholesale Electric Company. Corporate work has included pharmaceutical, high technology, utility, financial services and franchise organizations.

Illustrative projects:

* Design, promotion and leadership of an arts-based event that gathered citizens and representatives of civil society to deliberate on global challenges and explore responses, including new forms of collaboration.
* Evaluation of a Massachusetts Department of Public Health Federally-funded project to support development of a strategic plan for improving integration of HIV/AIDS and substance abuse services aimed at vulnerable populations in the African American and Latino communities.
* Evaluation of an electrical utility cooperative that provides power and services to 25 - 30 towns. Initiated as a traditional utility "management audit" under circumstances of dissension and bad feeling among the towns and the 200 staff members, the project was transformed into a future-oriented planning project. "Evaluation" was reframed as a step on the path toward positive change.

Email: wclausen at comcast.net
CCT courses (with links to syllabi): CCT618 (online)

Delores Gallo (Professor Emerita, CCT Program and co-instructor of CCT602 online) one of the three original founders of the CCT graduate program, was a central member of the Program since its inception. Her interests include Creativity and Learning, Professional Development, Curriculum Design, Elementary and English Education, and Invention. She led a six year staff and curriculum development process and an Invention Convention involving over 1000 students at the Quincy Public Schools. She has been widely sought after as a speaker or as a consultant on Professional Development workshops in educational and corporate settings.
Email: delores.gallo at umb.edu
CCT courses (with links to syllabi): CCT602 (online)

Renae Gray
is executive director of the Boston Women's Fund. A founding member, she has been involved with the fund for more than 20 years. She has more than 30 years of nonprofit experience, having worked with the Haymarket Peoples Fund, the Women's Theological Center, and the Cambridge Algebra Project; for the past several years she has been a consultant with Visions Inc., a nonprofit consulting organization that deals with issues of race and multiculturalism. Renae has served on the boards of many groups in the Boston area. She was also involved in creation of the Funding Exchange, a national funding organization in New York.
CCT courses (with links to syllabi): CCT618

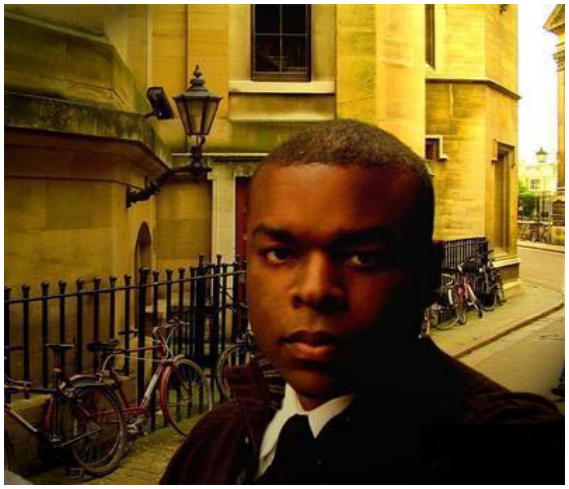
Olen Gunnlaugson, **Ph.D.** (part-time online instructor of CCT616)
is an Assistant Professor in leadership and organizational development within the

Department of Management at Université Laval, in Quebec City, Canada. Among other projects, he is co-developing an MBA micro program in *Complexity Studies, Consciousness and Leadership* with colleagues. Olen brings a multidisciplinary background to leadership studies. His work has been published across peer-reviewed academic publications and presented at numerous internationalconferences. His main research interests focus on dialogue and collective intelligence approaches to collective leadership, integral theory, transformative learning processes in groups and teams and contemplative approaches to inquiry.
Email: gunnlaugson at hotmail.com

CCT courses (with links to syllabi): CCT616 (online)

David Martin (part-time instructor of CCT601 & CCT655)
has served as a teacher, school administrator, director of curriculum and instruction, professor of education, and dean of education (at Gallaudet University in Washington, D.C.) before joining the UMass/Boston faculty in 2001. He holds the title of Professor/ Dean Emeritus from Gallaudet University. He has carried out teacher education in critical thinking since 1978, and is a proponent of the Mediated Learning model used by the followers of psychologist Reuven Feuerstein. He has published articles, books, and chapters in the areas of social studies education, educational leadership, teacher education, deaf education, and critical thinking. His published research in the field of critical thinking (which includes three chapters in the most recent edition of DEVELOPING MINDS, ed. by Costa) has focused on the effects of critical thinking strategies on the learner, and he has investigated those effects with special populations in the USA and several other countries.
Email: davidmartindr at aol.com
CCT courses (with links to syllabi): CCT601 (summer) | CCT655

Mark D. Robinson (part-time instructor of CCT619) is a visiting scholar at the Science Technology and Society Center at University of California, Berkeley and is completing doctoral research in anthropology at Princeton University. His general interests include medical anthropology, bioethics, the social study of science (STS). His research explores issues in pychopharmaceuticalization, contemporary biomedicine and neuroethics. His specific research questions focus on emerging innovations in neuroscience and biomedicine (especially relating to pharmaceuticals and technologies) and the attendant, emerging ethical implications. His additional research interests pertain to theories of human morality generally, the role of the social sciences in ethics, and the problem of language in the biosciences. Under a fellowship from Princeton''s Center for the Study of Religion, Mark conducted research regarding metaphor-use in neuroscience research. Mark is active with Princeton's Program in American Studies and is a member of the Technology and Ethics Working Group at Yale University's Interdisciplinary Center on Ethics. His work has received acknowledgments from the Institute for Humane Studies, The Committee on Institutional Cooperation, the National Science Foundation, the National Academies of Science and Princeton's Institute for International and Regional Studies.
Mark also brings clinical and professional experience including work with the Black Coalition on AIDS, the Centers for Disease Control and Prevention, the Public Health Foundation Enterprise, the San Francisco Department of Public Health, The Heartland Alliance for Health and Human Rights, the HIV Center for Clinical Behavioral Studies at Columbia University, the Department of Behavioral and Social Science at the University of California, San Francisco, Northwestern University's Weinberg School of Medicine. Mark's publications address topics spanning neuroscience, the history of antipsychotics and new developments in stem-cell research, genetics and prosthetics. Mark is a member of the Society for Medical Anthropology, the New York Academy of Science and the American Society for Bioethics and Humanities.
CCT courses (with links to syllabi): CCT619 (online)



Bob Schoenberg (part-time online instructor of CCT601)
is a graduate of the Critical & Creative Thinking Program at UMASS, Boston (MA, '92). He created and has taught the online course in Critical Thinking since 2003. Prior to teaching at UMASS, Boston, he taught Critical Thinking at MassBay Community College in Newton, MA. He has also served as a consultant and trainer to the Massachusetts Teachers Association (MTA), where he has given workshops in Critical Thinking and has taught at Regis College. Prior to teaching Critical Thinking, Mr. Schoenberg served as a software trainer and stress management consultant. He incorporates stress management into his course in Critical Thinking based on the premise that one can't think critically if one is stressed.

Bob has an extensive background in training and curriculum development. Combining his background as a software trainer, educator and curriculum developer, he provides a comprehensive and highly effective online experience for his students. He brings practical business experience to the online classroom as well. Believing that all professions can benefit from critical thinking skills he is especially interested in promoting those skills in the business world. An entrepreneur and trainer, himself, Mr. Schoenberg has written a book entitled, Critical Thinking in Business (Science Humanities Press, 2007).
Email: bobsch3 at gmail.com
CCT courses (with links to syllabi): CCT601 (online) (follow links)

Pianist **Ben Schwendener** sustains a unique voice in contemporary creative music and natural pedagogy, and is a leading authority on George Russell's Lydian Chromatic Concept of Tonal Organization. As a critically acclaimed pianist/composer, he has created music for dance companies, film, commercials and art installations. He has also written many volumes of children's piano music, and toured extensively throughout the U.S., Europe and Japan with his ensembles and on solo piano. His music can be heard on Label Bleu, Gravity Records and Alabaster.

Ben was an Editorial Assistant to the late George Russell. Schwendener is a certified

teacher (and while George was alive, of teachers) of the Lydian Chromatic Concept. He is often invited to speak at national and international seminars. A lifelong student of jazz, Ben has learned and played with jazz legends George Russell, Ran Blake, Jimmy Guiffre, Miroslav Vitous, Andrew Hill and Joe Maneri.

Schwendener lives and creates in Boston, and teaches at the New England Conservatory, the Longy School of Music and the Rivers School Conservatory in Weston, MA. He has also taught classes in Creative and Critical Thinking through the Graduate College of Education at UMass Boston. Ben is founder and director of Gravity Arts, Inc., a nonprofit organization providing customized educational services and products for individuals, groups and corporations.

Ben has taught Creativity courses as an adjunct since Spring 2000. His website is www.benschwendener.com. Email: ben at gravityarts.org
CCT courses (with links to syllabi): CCT 630

Gregg Turpin (part-time instructor CCT618)
has taught at Boston Latin since 1985, where he is a Mentor Teacher, and an Instructor of Foreign Policy and World History. He also teaches Communications technology at Framingham State and has served as a Lead Teacher for the Center for Leadership Development in the Boston Schools Department.
CCT courses (with links to syllabi): CCT618 (summer)

Luanne Witkowski (part-time instructor CCT602 online)
Studio artist in Boston & Wellfleet with works in collections throughout the United States. She represented by: Kingston Gallery, Creiger-Dane Gallery, & J.P. Art Market Gallery, Boston, MA; Hutson Gallery, & Provincetown Art Association & Museum,

Provincetown, MA. Luanne is Communication Design Studio Manager and instructor at Massachusetts College of Art and Design, Faculty at UMass/Boston, and an independent curator/art consultant (www.lewstudio.com).

Other credits include:

- ´ Founder/Director, Efka Project: artists pursuing further experience, exposure &education.
- ´ Basic Training: courses &workshops in the (w)holistic approach to the studio experience.
- ´ Studio Management Development: Fine Art and Communication &Environmental Design Studios, Massachusetts College of Art
- ´ Creativity 602 Online: Co-Faculty with Delores Gallo

Memberships include:

Kingston Gallery, United South End Artists, Provincetown Art Association, Mission Hill
Artists Collective, Boston Open Studios Coalition, Community Alliance of Mission Hill

M.A. Critical & Creative Thinking, University of Massachusetts/Boston(UMB)
B.F.A. Art History & Fine Arts/Printmaking, Massachusetts College of Art (MassArt)/ Boston
Special & Art Education, Lesley College/Cambridge
Workshops: Provincetown Art Association; Fine Arts Work Center, Provincetown; Art New England, Bennington,VT; Haystack Mountain School, Deer Isle, ME; Harvard University Museums.

Luanne's work will be shown in a solo exhibition at Kingston Gallery, Boston in October 2009.
A summer 2009 exhibition at Hutson Gallery in Provincetown is also planned.
She shows regularly with the Provincetown Art Association, United South End Artists, Mission Hill Artists Collective, and other groups.
CCT courses (with links to syllabi): CCT602 (online)

Abby Yanow Facilitator, Trainer, Consultant
Boston Facilitators Roundtable (BFR), President, 2001-Present
Trainer - Design and deliver paid workshops: Current
Jewish Vocational Service (JVS), Trainer 1999-Present
Dept. of Public Health / AIDS Bureau 1995-2001
Facilitator, Skillful Facilitation
Email: abbyyanow at hotmail.com
CCT618 (summer)

Associates from other Departments

Janet Farrell Smith (Philosophy Department, deceased)

Ted Klein
a Professor of Theology and Philosophy at the Swedenborg School of Religion, teaches Moral Education (CCT620) for CCT as well as courses in ethics and philosophy of education for the UMass Boston Philosophy Department. Among his accomplishments, Ted has: taught a variety of adult learners, including prison inmates, adults returning to school, and adults involved in career changes; developed ways to relate abstract concepts to life decisions, career concerns, and social issues; and authored a wide variety of accessible publications relating abstract concepts to

practical concerns.
Email: TKlein3388 at aol.com
CCT courses (with links to syllabi): CCT620

Last update 8 Jan. '11

CCT Faculty Priorities

Preconditions (agreed to or affirmed by core CCT faculty in Spring '07):
Steps taken to ensure that **matriculating students can be served through to graduation** despite uncertainty about resources for the Program:

- Required CCT courses are offered 1 semester in 3 (as against once per year), which frees regular faculty to share capstone synthesis teaching as well as ensuring that required courses are not cancelled for underenrollment;
- Electives are offered on a 2 year cycle to preserve the range of electives that the diverse CCT students need;
- Instructors in those courses find (more) ways to attract non-CCT students so as to buffer against the inevitable variations in enrollments in a small program;
- To minimize course cancellations, the number of electives offered does not exceed the projected demand from CCT students and, for cross-listed courses, students from other programs.

Articulated by Program coordinator in spring '08 and serving as backdrop for discussions monthly meetings of core CCT faculty.
New initiatives (e.g, #14-16 below) **subject to guidelines**:

- a) we are able to do what we've already committed to, which includes serving the students we have and doing so without adding unagreed-on burdens on each other as colleagues;
- b) any initiative is based on a plan with clear goals/objectives that addresses a) and includes a chance to take-stock afterwards to learn from how well we met the goals;
- c) consensus decision making means that no commitments of CCT's name or resources should be made without having the initiative discussed by the core faculty, so that concerns (e.g., regarding a & b) can be raised and addressed before we agree to go ahead.

Subject to periodical revision or reaffirmation the following, **what we are already committed to** includes (with order of priority approximate & negotiable):
1. Teaching existing classes; advising our students; sharing the advising/ reading of syntheses.

2. Improving the ways we serve the students who need help writing and thinking, including those who have finished all course work but have not completed their syntheses during the synthesis semester (writing support initiative to continues + http://www.cct.umb.edu/StepsToCompletion.html (with reduced pressure on Program coordinator to pull people through to completion), including Marathon day and Entrance interviews);
2a. Extra care for students of color who have difficulty;
3. Administration, see http://www.cct.umb.edu/AdminChecklist.html for division of tasks.
3a. Documentation & training of colleague to cover for Peter Taylor when he goes on leave
3b. Must keep everything well-documented & transparent & consistent in case CCT is ever sued by a litigious student (as learned by American Studies)
4. Recruitment advising and admissions processing through to matriculation.
5. Cross-listing/hosting and Promotion of courses to students beyond CCT to get the numbers up.
5a. Bringing in limited number of students into regular classes from a distance (through skype).
6. Reviewing CCT's shortcomings to improve as well as to reduce strain on Program Coordinator.
6a. Continuation of efforts (started January '08) re: curriculum integration across our courses (including requiring Reflective Practice Portfolio).
6b. Enhancing diversity in and through CCT.
6c. Update the curriculum in light of new developments in teaching thinking and facilitating reflective practice
7. Outreach events tied into recruitment (integrating rewarding activities with promotion & recruitment)
8. Science in a Changing World emphasis to support PT's aspirations and CCT strengths.
8b. Build recognition in the Boston/New England area for CCT-centered work in this area
9. Timely attention to possibilities about a new line or for restoration of lectureship appointment.
10. Certificate/MA partnership with CCDE (promotion of courses so that they run; needs of part-timers)
10a. Continuation of CCDE-funded assistant program coordinator
11. CCT Network on monthly schedule ("vertical" relations [alums connect w/ current students] to supplement horizontal relations; personal/ professional/leadership development of alums as Network leaders)
12. Non-network open houses
13. Collaboration with the LTET (non-licensure) MEd track to get students in CCT classes (or joint MEd/CCT classes), share advising of capstones?, ...
13a. Alignment with CEHD efforts towards new accreditation and continuous improvement thru assessment of learning outcomes. Also emphasis on Social justice/inclusion and on Community Engagement.

13b. Minimal (almost zero) demand on C&I staff & $$ and minimal fires for Chair to put out

14. Infusing CCT into other MEd programs
14a. Organize discussions that support intellectual development of C&I faculty
14b. Collaboration with new C&I faculty member, Donna DeGennaro, re: offerings for Ed Tech & Instr. Des.
15. CCT workshops for UMB groups.
16. CCT on the Cape & External partnerships (Kodaly, Exeter partnership, Arts initiative)

Division of labor within CCT/ delegation of primary responsibility
--subject to consensus decision-making at CCT program meetings and Chair's guidance transmitted thru coordinator
version 9/4/09, --items in red new or re-emphasized since last updates

Admin & general student advising	'09-10 division of labor	Issues & Action Proposals for CCT faculty to discuss (Attention needed: Who? When?)
1. Prepare course schedule (State & CCDE), get chair's approval, and ensure that the correct version gets to the registrar on time.	PT	
2. Enrollment projections (& planning so level of offerings match)	PT	
3. Enrollment-boosting arrangements: Crosslisting of CCT science courses, coordinate course offerings with COSMIC, revised Teacher Ed handbook references to CCT science courses, revised description of 611.	PT: crosslisting of 640, 650 PT: prepare PBL syllabus for governance approval based on initial daft by NLG	
4. Coordinate CCDE partnership around CCT certificates (incl. publicity, instructors for online & face-to-face sections, supervising assistant, promotion of Science in Changing World focus)	PT: promote Science in Changing World track PT: complete search & hire of 50% assistant--done; work with person (JS) on marketing plan; arrange enough CCDE courses for person	Promote G&T focus?

5. General student advising (incl. course plans from new students, assign students to CCT advisors, update CCT student handbook, promote competency requirement before final research courses, emails & flyers about course offerings, advise assigned advisees, entrance & mid-program interviews, writing support group	PT PT: all new advisees PT + AM + ? PT + ? PT & JS	
6. Use of Peoplesoft (for student info [esp. for online courses] & registration)	PT, with JS assistance	(Each of us learns how to do overrides & permissions)
7. Financial matters: Gallo fund, requests for use of ESS funds from CCDE (for dues, stipends for synthesis readers, etc.)	PT	CCT to budget new ESS funds for 09-10 -- done
8. Office admin & record keeping to prepare for program reviews (Database maintenance & liaison with GCOE database, preparing requested figures for annual reports, AA training, filing)	PT, with JS & AA assistance	
9. Synthesis completion (incl. binding, abstracts to database, exit self-assessment, certifying capstone completion, explicit agreements with students on completing during summer)	PT to coach synthesis instructors PT, JS, & AA to keep abstracts etc. up to date PT & JS: Marathon Days	Each instructor sees all syntheses thru to binding; & refine/implement other measures to prepare students to complete synthesis, http://www.cct.umb.edu/SupportToCompletion.html
10. Website maintenance, http://www.cct.umb.edu	PT, JS, & AAs	
11. Email News/ communication with students & wider community	JS, PT & AA	

12. Awards, Gallo fund, International Tuition waiver	PT interface w/ bureaucracy (w/ rest of faculty in choosing Gallo & annual awards)	
13. Liaison with Graduate Studies (incl. GPD meetings) & other duties (as defined in GS manual for GPDs and Graduate Bulletin)	PT	
14. Coordination with other Programs within the Department.	PT: coordinates Track A; publicize CCT options & advise students JS: Liaison w/ other programs	
Recruitment Outreach and Program Development		
15. Promote CCT courses to boost enrollment (incl. communicate with C&I student advisors)	PT & individual faculty re: their own courses PT: thru LTET JS: thru online courses	
16. Recruitment Outreach and Advising (incl. CCT network & website enhancements, e. g., more graphic website)	NLG & AA: University Open houses Network: JS w/ GAs (PT as backup) Website: PT w/ GAs Other: NLG (PT as backup)	Kodaly revive (PT plan)
17. CCT admissions subcommittee & liaison with Grad. Admissions admissions advising sherpherding applicants thru to matriculation	NLG & AM (PT to sign off & supervise record keeping, follow up & status reports) PT PT + JS	Need to get matriculation up to at least 13/year, if not 18
18. Open Houses, Special events (including UMB & Grad studies open houses & showcases) CCT Network as Community-building initiative	CCT Network monthly events –JS & GAs (PT as backup)	
19. Program Development subject to AQUAD plans (incl. faculty involvement in revising plans)	PT leads. First step: clarify items in 21 done (with some unresolved)	New step: respond to emerging GCE criteria about learning outcomes

19B. Prepare for AQUAD review (due 09-10)	PT (see 8 & 9) Align with TEAC review	
20. Train possible future coordinators in admin. history & procedures	PT: train 50% assistant	
21. Take lead in contesting/shifting the College's position about lines and resources for CCT (see minimal list for sustainable M.A. program, a-l, below)	PT wanted not to have to do this, but…	
a. all or some of required CCT courses are offered 1 semester in 3 (as against once per year at present);	done	
b. instructors in those courses find (more) ways to attract non-CCT students so as to buffer against the inevitable variations in enrollments in a small program;		
c. innovations are pursued that open up face-to-face required courses to students participating from a distance (e.g., through skype);	PT continues to refine; CS & AM w/ student assistance & review of anyone shifting from certificate to MA	
d. electives are offered on a 2 year cycle to preserve the range of electives that the diverse CCT students need;	CCT faculty agrees	

e. the number of electives offered does not exceed the projected demand from CCT students and, for cross-listed courses, students from other programs;	Brief Formula for state-funded electives = If MA students matriculating in year 1 are assumed to take 2.5 electives in year 2, then (after 10% attrition), the math works out to: 15 matriculants in year 1 = 2 cross-listed electives + 1 solely CCT elective. (NLG electives 07-09 exceed this formula)	
f. funding is assured for a dynamic, well-qualified instructor for CrCrTh 602 after Nina Greenwald's appointment ends (or the course is shifted to CCDE after Nina Greenwald's appointment ends);		PT to seek written agreement from Chair & dean – or shift the CCDE? NLG to continue in Fall '09
g. a 100% replacement is funded whenever Peter Taylor (as the only professor full-time in CCT) takes leave;		PT to seek written agreement from Chair & dean or mentor someone from Track A backed up by JS-- PT trying to get Jack Levy behind this
h. CCT faculty members from CLA can serve as Program coordinator;		PT to seek written agreement from Chair & dean (unless CS & AM rule this out) (not given yet)
i. the particular, diverse administrative and program development work required to sustain a small graduate program is recognized by the Department and College;	1 CLR/year for program coordindator continues for 09-10 Partnership w/ CCDE funds 50% Asst. Coordinator	Options other than 21g & h to cover if PT goes on leave or needs a break from CCT admin

j. (perhaps) the online sections are discontinued so as not to draw students away from the face-to-face sections and to reduce the high administrative load of getting such courses up and running -> develop distance option in face2face courses as well as online courses	No. Grad Studies has confirmed that certificate students who switch to MA can transfer in all 15 credits even if they are online. Grad Studies has confirmed that CCT's face2face sections that bring in some students from a distance do not require special approval.	
k. Nina Greenwald and Peter Taylor teach more sections out of the CCT program;	NLG to teach for Teacher Ed in 09-10	
l. the CCT faculty can make time to update the curriculum in light of new developments in teaching thinking and facilitating reflective practice;	Reflective Practice/ metacognitive portfolio, piloted by GAs, promoted to incoming students starting Fall 08, PT	Continue discussion Reflective Practice/ metacognitive components from AM & NLG
m. the smaller program passes muster in the 09-10 AQUAD review.	(See 20 as a first step)	Will the review happen? What approach to take?
22. Specific AQUAD objectives	Overall plan affirmed Nov. '07, http://www.cct.umb.edu/aquad07plans.html (Adjustments: Removed past target dates + minor changes mostly to reflect initiatives since 1/03 that are already happening.)	
Science in a Changing World (objectives A3b, C3, D2, E5)	SICW track now thru governance (http://www.cct.umb.edu/SICW.html). PT & AM: recruit associate faculty & promote	

Start Your Own Writing Support Group:

Experiences from the Critical & Creative Thinking Graduate Program

Session at the Teaching for Transformation conference, Jan 22, 2010

Abstract: Students from the Critical & Creative Thinking Graduate Program convey insights about developing a writing support group from their experience in 2009. Participants will be led to experience some of the current processes used by the group.

Intro: The Critical & Creative Thinking (CCT) Graduate Program (http://www.cct.umb.edu; cct@umb.edu) wants to provide support beyond regular classes for students to develop their writing. It's not about whether students know the difference between it's and its. CCT sees writing improvement in broad terms as students conveying their distinctive voices and thinking through writing and developing their voices and thinking through writing, sharing writing, and revising in response to comments. The group behind this session derives from CCT's goal in this area for students to develop a long-term approach to helping themselves, understanding their weaknesses, and establishing professional and personal relationships that provide needed assistance.

1. intro: we're following the format we have evolved for our sessions, conveying not only some insights from students' experience in 2009 about developing a writing support group*, but also providing an experience that might motivate session participants to create their own writing support group.
[* See Report on first semester at http://cct.wikispaces.umb.edu/WritingSupportReport09]

2. freewriting exercise (for guests this would be about the experiences, ideas, etc. that led them to be interested in a session on Starting Your Own Writing Support Group; for group it would be about the experiences, ideas, etc. that we have to share in such a session)

- In a guided freewriting exercise, you continue where a sentence provided by the instructor leaves off. For today, “When I think about getting or giving support for writing, the experiences and feelings that come to mind include…

3. check-in (name, affiliation, hopes for the session)

- Peter Taylor (CCT director), Mike Johns (CCT student), Jeremy Szteiter (CCT assistant), Erin O'Brien (Grad. Writing Center), Meesh McCarthy (Grad. Writing Center), Judith Erdman (Instructional Design Program Director), Duncan Nelson (English), Beebe Nelson (http://www.iapdonline.com)

4. discussion
each of the group present says something about the experience and what we've learned -- 3-5 minutes
Erin O'Brien, UMB Graduate Writing Center, comments on what we've said
Question & Answer -> free discussion

- Themes that emerged:
  - A support group fits into a picture of trying to help students pull many different pieces together (other tings besids coures are important)
  - Give yourself permission to read your writing respectfully
  - Asserting legitimacy of time given to a focus on writing
  - Establishing institutional support
  - "Communities of Practice"
  - Bringing in insights from past experiene vs. the power for a group in inventing its own wheeels
  - Making an appointment with oneself to write
  - By not advising each other, it made it possible to listen to ourselves;
  - Emotionality
  - *+ more*

5. ten minutes writing about steps to move forward based on what emerged during this session (on whatever it is each of us wants to move forward on)

6. closing circle: one thing we're taking away to work with, one thing that could be developed further if this kind of session were to be repeated.

- Form a support group for support groups; Be more active in drawing in participants from beyond UMB, More student voices, Supply snacks, Keep going "against the odds," Support group for business around writing, Is support group exclusive to CCT?

CITseminar10

Engaging Students in a Changing University

CIT Faculty seminar Spring 2010

- Donna DeGennaro
- Eugene Gallagher
- Mickaella Perina
- Peter Taylor (facilitator)
- Ping-Ann Addo

wikipage: http://ptaylor.wikispaces.umb.edu/citseminar10, which, during the semester, was editable by all participants

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Theme

a.k.a. Point of departure:

- focus on re-assessing and exploring new pedagogies to address the changing conditions and educational landscape at this historical moment at our university. This will include an assessment of the academic component of the university's Strategic Plan and its implications for teaching and learning in our classrooms. Possible topics might include teaching and learning in large classrooms; the interface between technology, teaching and learning; and new conceptions of faculty development.

Sessions

W-2-157, 12-2.30 (exc Jan 22)

Jan 22, Intro, autobiographical introductions, and initial organization

Apologies from GGabbard (for whole semester), GeneG, FH, MP. Present: DD, PT, PA
Initial guided freewriting starting from sentence provided by the instructor-

- "I want to make sure I do not leave this semester's seminar without raising issues that concern me, such as, …
- "When I consider times in the past when I've missed out on raising something that I would have liked to, the thoughts/ feelings/ experiences/ ideas that come to mind include..."

Autobiographical Introductions – How I came to be someone participating in a faculty seminar on "Engaging Students in a Changing University"

- Gives participants an opportunity to 1. introduce themselves in narrative depth, their current and emerging work, and 2. learn more about each other
- Peter Taylor will go first to model. 15 minutes maximum. Everyone encouraged to take notes on points of intersection, interest, curiosity

Discussion of commonalities & divergences
Initial organization

- Not a syllabus given by seminar leader, but sessions volunteered by participants
- Participants involved in and running sessions on:
  - Inquiry into some aspect of or innovation in their teaching
  - Peer observation and Reflection on each other's classes
  - Incubation of collaborations and possible interventions ("changing the

university as it changes")
    - Lessons/briefings/discussions on tools, resources, ideas (e.g., on Problem-based learning, on email management)

Closing circle (something taking away to work on; something that could be improved/ developed further from today)
Take-away: "Cultivating Collaborators: Concepts and Questions Emerging Interactively From An Evolving, Interdisciplinary Workshop," ms. by PT, Fifield, Young
Homework: PT to prepare for Feb 3 session & arrange audio-connection for FH whenever needed; DD to find out about state of UMB Strategic planning; PA to get "syllabus" from previous CIT seminar.
Audio recording of session available to those not present, but not for distribution beyond the group

Jan 27, More intro, autobiographical introductions, discussion of commonalities & divergences, and initial organization

Feb 3, apologies from FH for whole semester

- **Peter T., Discussion of his inquiry (a.k.a., teacher research) on a concern about Problem-based learning: How can instructors be sure to cover the required subject matter when students decide their own focus of inquiry?**
    - Afterthoughts

Feb. 10, conference call check-in (snow day)
Feb 17, Donna D., visualization techniques

- Additional sources to stimulate thinking about graphic representations, http://scimaps.org, Ecologies of Knowledge
- PT's "Diagramming of Intersecting Processes (a teaching activity under development)," http://www.stv.umb.edu/i04IP.doc

Feb 24, Gene G., on teaching the same course to face2face and to online students

I will present the curriculum design for teaching one key module in EEOS601 (Introduction to Applied Statistics). This EEOS core course meets the data analysis requirement for EEOS M.Sc. students and serves as a prerequisite for EEOS611, the core statistics class for EEOS doctoral students. The module that I'll present is based on Larsen & Marx (2006) Introduction to Mathematical Statistics and its Applications Chapter 4 on Special Distributions (Poisson, Normal, Geometric, Negative Binomial and Gamma in addition to an introduction to Monte Carlo simulations). The course is calculus-based; EEOS requires mathematics through calculus for all applicants. There are three different ways that the course is offered: 1) In person and via interactive TV to other UMASS campuses as part of the Intercampus School of Marine Science Graduate degree program, 2) In person during the Winter intersession (15 three hour sessions during a 3-week period), and 3) Completely asynchronous through UMASS/Boston online. I plan to offer the course in all three formats in the 2010-2011 Academic year, with Class 1 and 2 being offered as a hybrid course with in-person and online students sharing the same web site. The winter intersession class would be offered in the EEOS computer lab with all students having access to Matlab, the program used throughout the course for solving problems. All students taking the class must use Matlab throughout the course for solving problems and presenting their results.
For the workshop format, I'd like to follow the Peer Review process for Understanding by Design (UbD) curricula as described by McTighe & Wiggins. I'll provide copies of the relevant pages from their book describing the UbD design standards, the planning

template and the Peer-review process. I combine UbD with differentiated instruction (DI) as described by Tomlinson & McTighe. I'll provide copies of Chapters 3 and 9 from their book (read only through page 145 in Chapter 9).
I'll provide copies of my syllabus for the Winter intersession course and Chapter 4 from Larsen & Marx (2006). This chapter is quite challenging, but the concepts are vital to understanding many advanced areas of statistics and their applications. In the in-person & interactive TV version of the course, I would devote one week (2 75-min classes) and 2 homework problems to this material. In the online version of the class, one week of the 12-week online course and one problem set would be based on this material. In the winter intersession class, I would spend 1 2.5-hour class session, the 5th of 14, on the concepts from chapter 4. I would anticipate that students would have time to have only briefly read this material before arriving for the 6-8:30 pm class and problems based on this material would be completed during the 2nd half of the 2.5-h session.

Mar 3, Ping-Ann, engaging students in abstract thinking about actual situations in the world

Mar 10, Mickaella, on assignments that allow differentiated responses
Prep includes chapter 1 and 2 of Differentiated classroom: Responding to the Needs of All Learners by Carol Ann Tomlinson (available by ebrary).

mid-semester Critical Incident Questionnaire

Mar 17 -- no meeting

Mar 24, PT leads viewing & discussion of "Facing the Music" -- on a changing department in a Changing University. (Reading, "I'm borrwing my way through college..." from Left Business Observer and "Is , Ought, Ends?" from Arena Magazine)

Mar 31, Getting beyond talk of deficiency in students & how to turn our frustration (e. g., about not following instructions) into productive directions. (DDeG suggests chapter 7 of Cambridge Handbook of the Learning Sciences; also online learning (ch. 24) and online communities (ch. 27) -- dialogue process discussion initiated by PT

Apr 7, Peter Kiang guest 12-1.15, to move us from looking at the changing university and seeing this mostly negatively/apprehensively to a longer-term coalition-building perspective. Readings:Kiang, P.N. (2008). Crouching Activists, Hidden Scholars: Reflections on Research and Development with Students and Communities in Asian American Studies in Charles R. Hale. (ed.) Engaging Contradictions: Theory, Politics, and Methods of Activist Scholarship. Berkeley: CA. University of California Press, 299-318; Rhoades, G., & Slaughter, S. (2004). Academic capitalism and the new economy: Challenges and choices. American Academic, 1 (1), 37-60.

Apr 14, P-AA leads a session on implementation of new faculty development proposals in light of emerging strategic planning emphases. Rajini Srikanth as visitor from 12.15-1.15
Reading: pp. 43-63 of http://www.cit.umb.edu/documents/FacultyDevelopmentCommitteeReportFinal6_19.pdf
Innovative Models for Organizing Faculty Development Programs: Pedagogical Reflexivity, Student Learning Empathy, and Faculty Agency
Jay R. Dee and Cheryl J. Daly (2009)
See also: proposals for Center for Improvement of Research and Transdisciplinary Research Workshop

Apr 21, Assessment for Problem-based learning. Guest: Douglas Allchin (visiting for workshop). Manuscript for discussion

Apr 28, Learning through discussion, "led" by Gene; reading: "Knowledge building," by Scardamalia & Bereiter
I'm a big fan of the LTD method, and I'd like to demonstrate how it can be used for a graduate seminar. In the original 1977 Sage publication by W. F. Hill, pages 22-31 describe the format for the discussion. Prepare for the discussion using the guidelines on page 48-54. A central part of the LTD method is that I can't and won't lecture or participate in the discussion except as leader. In my own classes, I'd put anything that I wanted to contribute in a handout given out a week in advance

May 5, PT leads Taking stock -- where have we come and where might we go from here? post-it activity

May 12 -- no meeting

May 19 -- 3.30-5.30, Social gathering in combination with other CIT seminar

Other topics not covered directly by sessions:
PT: giving instructions that are read, understood, followed -- both in face2face and online courses. how to turn our frustration into productive directions. (E.g., showing frustration to a student whose problems relate to not reading or not following instructions might well reduce the chance that they'll read and follow next time.)
PT: compile an open-source, blackboard-free guide for other faculty
MP wants to learn more about differentiated instruction & understanding by design
Creating a culture of discussing teaching in departments beyond these CIT seminars
Assessment and grading, incl. differentiated assessment
Embedded writing support

Observations
Invitation to presentations from PT's Sci & Pol. Change course (taken up once by Ping-Ann)
Invitation to Gene's statistics class, M or W, 10-11.15, Presentation Room 3, Healey Library (taken up once by PT)
Invitation to Donna's class in Dorchester (didn't come to pass)

Tools/Processes/Resources

referred to at some point in sessions or emails

Guided freewriting

Eric Mazur on teaching large classes--confessions & innovations

http://onstayingalive.wordpress.com/, "Reflections on the difficult work of sustaining an emotionally, ethically, and spiritually healthy life in academia—no matter what happens."

Social network Nings, a glimpse, see also http://www.ning.com

Audio resources: Audacity, garageband (on MACs),...

http://prezi.com, presentations beyond powerpoint

open-source, blackboard-free guide

Sunday NY Times cover story on good teaching

Program in Science Technology and Values

understanding scientific, technological and social change

Science and technology are increasingly important sources of change in the world. The Program in Science, Technology and Values offers students the opportunity to examine historical, socio-political, cultural, philosophical, and ethical dimensions of science and technology. It encourages both science and non-science students to analyze, in a focused way, the impact of science and technology on other social institutions and the impact of those institutions on science and technology.

Program Requirements

Students who declare a "program of study" in Science, Technology and Values complete a group of science and/or mathematics courses, and a group of courses focusing on science, technology, and values. For matriculated undergraduate students, successful completion of the program is recorded on official University transcripts when they have met all graduation requirements.

I. The science/math component

Students must complete four science or mathematics courses, at least one of which must include a laboratory component.

> This can be accomplished by completing the Natural Science/ Mathematics distribution requirement or a science/math Major for students seeking a B.S. or by taking one course in addition to the distribution requirement for students seeking a B.A. [*]
> Courses which count as science/mathematics courses for the purposes of this science/ math sequence include any courses in biology, chemistry, physics, earth and geographic sciences, environmental, coastal and ocean sciences, and courses at 130 level or above in mathematics and computer science. The following courses also count: Psychology 260 , 270, 439, 466, 469, and 475 ; Anthropology 105 , 212, 241, and 316.

II. The science, technology, and values component

Six courses are required for this component. At least three of the six courses must be taken at the 300 level or above [*]. Students may transfer in up to three of these courses and may take one on a pass/fail basis.

Area I: Philosophy and Values *(at least two courses must be taken from this list)*

Phil 220, Environmental Ethics Spr 11
Phil 222, Moral Issues in Medicine Spr 11
Phil 307, Technology and Values
Phil 346, Philosophy of Science
Phil 481, Advanced Philosophy of Science

Area II: History and Politics *(at least two courses must be taken from this list)*

Chem 476, Historical and Philosophical Background of Selected Chemical Theories
EEOS 355, Historic Environments
EnvSty/PolSci 250L, Environmental Policymaking
EnvSty 246L, Environmental History
PolSci 240, Politics, Probability, and Human Health
PolSci 348, Science and Public Policy
PolSci 370, The Darwinian Revolution
PolSci 367, Politics by Internet

Area III: Electives in other fields of science and technology studies

Anth 357, Culture, Disease, and Healing
Anth 358, Comparative Health Care Systems
Art 230, Architecture, Design and Society Spr 11
Clsics 294, Magic and Science in Greece and Rome Spr 11
ComStu 250, Analyzing Media Spr 11
ComStu 300, Information Technology and Human Communication Spr 11
Econ 345, Natural Resource Economics and Sustainable Development
Econ 349, Economic Approaches to Environmental Problems
Engl 183G, Literature and Society (theme: "Literature, Medicine, and Culture")
Engl184G, Technology and the Soul
Engl186G, Gender and Science Fiction
Engl 334, Science Fiction
Engl 343: Literature, Culture, and the Environment
Engl 406: Victorian Age; theme: "Realism, Sensation, and Science." Spr 11

EnvSty 364, Environmental Justice
EnvSty 401, Environmental Problem Analysis and Policy Formulation Spr 11
EEOS 260, Global Environmental Change
Honors 290**, Science and Natural History/Current EventsSpr 11
Intr-D 125, Science for Humane Survival Spr 11
Math 370, History of Math
Phil 265, Sanity and Madness Spr 11
Pol Sci 377, Politics Of Energy
Sociol 384, Sociology of Health, Illness, and Health Care
Sociol 386, The Sociology of Mental Health and Illness

Sociol 440, Sociology of knowledge and ignorance
WoSt 210G, Gender and the body
WoSt 260, Women's Health Care

[*]The schedule of courses or the compilationfrom the University Advising Office identifies courses that cover the various distribution requirements.
[**] Most Honors Program coursesare open to students outside the program who apply for permission.

In addition, advanced undergraduates may choose, with the permission of the instructor, the following graduate courses:

Area I or III

CrCrTh 619, Biomedical Ethics Sum 11

Area II or III

CrCrTh 640, Environment, Science and Society: Critical Thinking
CrCrTh 645, Biology in Society: Critical Thinking
CrCrTh 649, Scientific &Political Change Spr 12
EEOS 697, Risk Analysis in Environmental Health

Area III

CrCrTh 611, Seminar in Critical Thinking (Theme: Problem-based learning)
CrCrTh 650, Mathematical Thinking Spr 11
CrCrTh 652, Children and Science Fall 11
English 600, Eco-criticism
English 663, The End of the World
WoSt 597, Gender, Race, and the Complexities of Science and Technology: A Problem-based Learning approach Spr 11
(By application through the Graduate Consortium in Women's Studies)

Faculty

Faculty who can advise prospective and current students:

Program Director: Peter Taylor (life, environmental, and health sciences in their social context; critical reflective practice in science) [617.287.7636, Wheatley Hall, 2nd Floor, Room 157]
Arthur Millman (environmental ethics; philosophy of science)
Dorothy Nelson (effect of information/electronic technology on our lives)
Louise Penner (literature and medicine; medical humanities)
Rachel Skvirsky (biology in a social context, especially genetics and molecular biology)
Malcolm Smuts (early modern science; agricultural improvement and scientific or quasi-scientific observation in the 17th century)
Nancy Stieber (history of urban planning and urban design; space, place, and the shaping of the environment)

Additional Affiliated Faculty

Chris Bobel (social movements and social change/feminist activism, social constructions of motherhood &parenting, women's health)
Susan Gore (medical sociology)
Nina Greenwald (problem-based learning with biomedical cases)
Esther Kingston-Mann
Cynthia Jahn (relationship betwen literacy/cognition and information/communications technology)
David Levy (envtl. science in social context; innovation and renewable energy)
Scott Maisano
Bob Morris (Intellectual Property Rights, especially the Open Source Software and Creative Commons Licensing movements)
Tammy Murphy (environmental economics and risk analysis)
Ken Rothwell
Mark Schlesinger (information technology and human communication; social and cultural change related to information technology)
Robert Stevenson (citizen science; technological change, values &institutions)

Related UMass Boston-based activities

- Science in a Changing World Graduate Certificate and M.A. (Other Graduate-level offerings)
- Plans for STV Program
- Inter-college faculty Seminar in Humanities and Sciences
- New England Workshop on Science and Social Change
- Environmental Studies Program
- Education for Sustainability courses
- Honors Program, with link to upcoming courses
- Science in a Changing World wiki

This publication is drawn directly from the STV website, http://www.stv.umb.edu, which includes links to more information about faculty interests, courses taught, and contact information


source: gettyimages.com

Inter-college faculty Seminar in Humanities and Sciences (ISHS)

A forum for discussion and interaction among faculty at UMass-Boston. Faculty from different disciplines and colleges come together to focus on topics of common interest, exchange ideas, renew their intellectual energy, and advance their work in a spirit of adventure and collaboration.

At the core of ISHS activities is a semester-long faculty seminar, focused on a particular theme. Participation in the seminar, which meets every second week, is open to full and part-time faculty at all levels; the ethos is democratic and interactive. No single member is responsible for the full semester's activities; leadership of the seminar rotates, with participants taking it in turn to lead the discussion, and all contributing to a collective enterprise. The basis for discussion might be a set of readings (or images, or music), or a piece of writing or creative work by the presenter(s), or some combination. Where relevant we may use the internet as a resource: to provide readings or other material; to facilitate discussion; to set up an archive and maintain a work-in-progress forum.

For any ISHS seminar, participants should feel free to approach the topic in your own way, and as it relates to your own interests. What we are looking for is a group of people who would like to explore their own particular 'take' on the topic in the company of others; to enrich each other's perspectives; to deepen their own imagination and conception of the issues; and to see what results from a collaborative, interdisciplinary exercise. You don't have to be an expert; and you don't have to limit yourself to our suggestions. Ideally this will be work in progress for all, which will produce ideas we may not have anticipated.

Fall 2010 -- Who gets to use race--or stop using it--and at what cost?

> explores current and past uses of racial and ethnic divisions as well as attempts to complicate or jettison such categories

Past themes

Spring 2010 -- Engaging Colleagues in Caring Collaborations

What do our theory, practice and life experience tell us about the source and strength of collaborations that we value?

Fall 2009 -- Science and society at UMass Boston

weekly brown bag presentations & discussions

Spring 2009 -- Science and society at UMass Boston

highlighting the range of science and society work going on on campus

Spring 2008 -- Teaching across divides

the challenge of teaching courses that link humanities or social sciences to natural sciences...

Fall 2007 -- Who makes sense of developments in science and technology?

delve deeply into readings from scholars interpreting science and technology (S&T) in their social context...

Spring 2007 -- Placing science and technology in social context

How can we make sense for our students and other audiences of the social shaping of S&T as well as the wide-ranging discussions about S&T?

Fall 2006 -- Perspectives on/from the New Sciences of Complexity

"...terms from complexity theories of recent decades have found their way into discussions in the arts, film, literature and other humanities, cross-disciplinary endeavors in the sciences, and the popular media...

Spring 2006 -- Sustainability, science, and social change

What does it mean for people to promote sustainability or development that "meets the needs of present generations without compromising the ability of future generations to meet their own needs."

Spring 2005 -- Disease and difference

What makes a difference in who becomes diseased -- what counts as disease and who takes responsibility for it? What changes over time can be seen and how do perspectives vary among cultures and social groups? How are different people

organizing now to influence change and improvements in health?

Spring 2004 -- Social uses of 'genetic' knowledge

This theme was designed to resonate with current concerns in many fields as well as to offer scope for a historical and philosophical discussion of attempts from well before the advent of modern genetics to find explanations in nature for inequalities in society.

Possible future themes

- Living and working among digital natives
- Minds, bodies, contexts: Diversity and change
- How and why? Diverse understandings of cause
- Futures past and present
- Plans and crises, Action and reaction
- Local knowledges and subaltern sciences
- What don't we know, and why? (Paradigms, Priorities, Censorship, Secrecy, Futurology, etc.)

- additional suggestions welcome.

ISHS is organized by the Program in Science, Technology and Values and the Graduate track in Science in a Changing World. The seminar was originally based on a model developed successfully at UMass Amherst.

Last update 11 May 2010

Potential synthesis readers, their interests, and contact info

(includes Regular CCT teaching faculty; Associated CCT faculty not teaching; Part-time Faculty teaching Online & Cont. Ed. CCT courses; Other UMB faculty; Experienced CCT alums

CCT regular teaching faculty

Lawrence Blum

moral education, race studies and multicultural education, workshops on antiracist education to K-12 teachers in a variety of settings
617-287-6532, lawrence.blum@umb.edu

Nina Greenwald

critical and creative thinking, problem-based learning,innovation and invention, multiple intelligences, and gifted education
617-287-6523, nlgreenwald@Comcast.net

Arthur Millman

critical thinking, applied and professional ethics, philosophy of science
617-287-6538, arthur.millman@umb.edu

Carol Smith

understanding the dynamics of conceptual change both in children and adults, models, analogies, and metaconceptual understanding, impact of schooling on metacognitive development
617-287-6359, carol.smith@umb.edu

Peter Taylor

reflective practice; complexity of ecological or environmental situations; complexity of biosocial development; complexity of the social situations in which the environmental research is undertaken; critical science and environmental

education
617-287-7636, peter.taylor@umb.edu

Part-time Faculty teaching Online & Cont. Ed. CCT courses

Allyn Bradford, allynb@aol.com (Dialogue process, group process, teambuilding, and action learning
Suanne Clark, sclark@berklee.edu
Wally Clausen, wclausen@comcast.net
Delores Gallo, delores.gallo@umb.edu
Renae Gray, sisrenae@hotmail.com
Olen Gunnlaugson, gunnlaugson@hotmail.com
Bob Schoenberg, bobsch3@gmail.com
Gregg Turpin, gregg1411@hotmail.com
Luanne Witkowski, Luanne.Witkowski@massart.edu
Abby Yanow, abbyyanow@hotmail.com

Associated CCT faculty (not teaching CCT courses currently)

Ted Klein, TKlein3388@aol.com (Moral Education; accessible publications relating abstract concepts to practical concerns)
David Martin, davidrmartindr@aol.com (Metacognition)
Ben Schwendener, ben@gravityarts.org (Creativity, music)
Brian White, 617-287-6630, brian.white@umb.edu (Biology Education, Educational Software and Multimedia)

Other faculty members willing to serve as readers

(Subject to topic and availability; Provisional list of interests)
Bala Sundaram, 617-287-6055 bala.sundaram@umb.edu (non-linear dynamics, mathematical biology, Scientfic thnking skills)
Arthur Eisenkraft, 617-287-7652 arthur.eisenkraft@umb.edu (Science education)
Peter Kiang, 617-287-7614, peter.kiang@umb.edu (Ethnic studies, Urban education)

Liz Marran, 617-287-5743, Elizabeth.Marran@umb.edu (Art)
Mark Pawlak, 617-287-6557, Mark.Pawlak@umb.edu (Math education, Poetry & publication)
Steve Schwartz, emeritus, steve.schwartz@umb.edu, (Cognitive Psychology, Creative Thinking, Problem Solving, Representation of Information, Math and Science curriculum reform, the uses of technology in education, and the use of metacognitive aids in curriculum development)
Rachel Skvirsky, 617-287-6617, Rachel.Skvirsky@umb.edu (biology in its social context, especially genetics and molecular biology)
Rajini Srikanth, 617-287-5521, Rajini.Srikanth@umb.edu (Literature, globalization)
Rob Stevenson, 617-287-6572, Robert.Stevenson@umb.edu (citizen science; technological change, values & institutions)
Ann Torke, 617-287-5736, amtorke@gmail.com (Art)
Ann Withorn, 617-287-7365, Ann.Withorn@umb.edu (Welfare state, privatization, and social movements)

Experienced CCT alums

TBA

Return to home | handbook | search
Last update 27 May 09

CCT Network (Live)

Recipient of 2009 Beacon Students Leadership Award for Best Program run by a Student Group at UMass Boston

- ***organizing, in a sustainable fashion, personal & professional development, community building, and educational-innovation activities beyond the formal CCT program of studies.***
- ***supplementing students' education through the involvement of alums.***
- ***continuing alums' education by their involvement in the education of students and each other.***

Alums and other members of the wider CCT Community who want to stay connected should *send us their email address and make use of: CCT social network site, News & Calendar, Wiki updates about alums, Audio reflections from alums.*

- *Please also take a minute to email us the name and contact info for other alums you are in touch with.*

Events Ahead

(open to public unless otherwise noted)

2010

Fall Schedule

Monday, Sep. 13: Fall Orientation and Presentation by alum Ashok Panikkar: Conflict Resolution in a Multi-national Consulting Firm

Monday, Oct. 4: Thinking Through Science in a Changing World

Monday, Nov. 1: Storytelling and the Personal Journey

Monday, Dec. 6: Fall Presentations by Synthesis and Reflective Practice students

Past activities

2010

- Monday, Feb. 1: CCT Network event: Reflecting and Connecting for Lifelong Learning
- Monday, Mar. 1: CCT Network event: Our Lives and Other Worlds: CCT Alum presentations
- Monday, Mar. 22 Reflective Practice student midterm check-ins, no CCT Network event
- Monday, Apr. 5: CCT Network event: CCT Deep Exploration and Dialogue: "Changing Direction with CCT: Finding Our True Path"
- Monday, May 10: Spring Synthesis and Reflective Practice Presentations
- Wednesday, May 19: Nina Greenwald and Critical & Creative Thinking: 25 Years and More

2009

- Thursday, Dec. 3rd: Synthesis presentations, 4-6.30, & Reflective Practice presentations + year-end reflective activity, 6.30-9. Sci 4-64.
- Monday, Nov. 9th: "CCT Deep Exploration/Dialogue: Creativity in Families" (family structure/relationships and influences on CCT)
- Thursday, Oct. 8th: alum presentations: Our Lives andOther Worlds ("workplace innovation, leadership, and organizational evelopment")
- Thursday, Sept. 10th: "Reflecting and Connecting for Lifelong Learning" (orientation)
- Thursday, May 28, working session on initiating Reflective Practice/ Metacognitive Portfolios
- These portfolios allow students to make links among your courses and the reflection/metacognition on CCT experience can enter/infuse your capstone synthesis project; see http://cctrpp.wikispaces.com/ for more details.
- April 27 & May 4, Synthesis presentations by graduating CCT students
- March 23, Panel Discussion: "How College Students Find Their Voices as Writers: Exploring What it Means to Teach and Learn Writing" with Peter Elbow as special guest, author of Writing with Power and several other works on writing.
- February 27, "Our Lives and Other Worlds III: Music, Performances, and Reflections from Graduates of the Critical & Creative Thinking

Program"

- January 23, "Reflecting and Connecting for Lifelong Learning--and Teaching (an introduction to the full range of CCT instructors)"

2008

- December 15, Looking Out For Each Other: Thinking Our Way Through an Economic Funk -- reading aloud and end-of-year potluck.
- November 19, "Re-membering (with) Michael White: Two CCTer's acknowledge Michael's influence in an introduction to narrative work in our lives and communities," led by Laura Rancatore and Peter Taylor.
- November 6, The Office of the Vice Chancellor for Community Relations showcases the work of CCT graduates (as well as including presentations by current students & faculty).
- October, Weds 1st. "Our Lives and Other Worlds II: Visual Images and Reflections from Graduates of the Critical & Creative Thinking Program"
- September, Friday 5th. CCT Community event: Reflecting and Connecting for Lifelong Learning (including introduction to the new social network site ("ning") and New student orientation and introduction to compiling a "metacognitive and reflective practice portfolio.")
- June, Tuesday 10 Dialogue session by conference call (internet enhanced) on "Critical & Creative Thinking in Practice: Where have we come and what lies ahead?" Led by Jeremy Szteiter (with pre-session guidance from Olen Gunnlaugson). technical details for participants, session recording
- May, Weds. 7 &14, CCT in Practice: Graduating students' synthesis presentations
- April, Weds 16th, "Artful Thinking: Using the Power of Art to Teach Thinking Across Curriculum," featured CCT alum & Project Zero principal researcher, Shari Tishman (organized by Greenwald & Martin) (evaluation of the event)
- March, Monday 31
    - Not a CCT Network event, but CCT Open House, Mon. 31st, 6.45-8.30pm, THE BOSTON UNIVERSITY BIO-LAB CONTROVERSY, An invigorating discussion with one of last semester's problem-based learning (PBL) teams (audio file linked to the report on the event)
- February, Tuesday 26
    - "Our Lives and Other Worlds: Writing, Stories, and Reflections from Graduates of the Critical & Creative Thinking Program"
    - Includes links to the (imperfect) sound track of this wonderful, inspiring evening*

- January, Friday 25. Session at the Teaching for Transformation conference on the impact of Processes of Research & Engagement course; CCT Community event (based around a "Bingo" activity to introduce everyone to the range of resources available on the CCT website and wiki); Organizing Group initial dialogue session.

Rationale

1. The CCT Network serves to organize in a sustainable fashion personal & professional development, community building, and educational-innovation activities beyond the formal program of studies.

    - (Previously these have been pursued under the ThinkTank for Teachers of Critical Thinking, Reflective Practice Group, the Alum Network, the Thinking for Change Outreach Unit, the CCT in Practice events, and Changing Life, aka "Helping Each Other to Foster Critical Thinking about Biology and Society.")

2. The CCT Network enacts the "bongo" [*] philosophy of students' education being supplemented by the involvement of alums and alums' education being continued by their involvement in the education of students. In this spirit the Network stimulates alum involvement as advisors of students, contacts for professional networking, participants in events, and organizers to make the Network self-perpetuating.

    - *Source for bongo philosophy: Paul Jablon, Lesley University.

Basic Organization

(updated May 08, after CCT faculty review)
Core Organizers
Program Director (Peter Taylor), Program Assistant (Jeremy Szteiter), Graduate Assistant (Tara Tetzlaff), and 1-3 other volunteers drawn from the CCT faculty, alums, and wider CCT community (= current students, regular faculty members, part-time faculty members, alums, and other allies/ associates of CCT).
(Program assistant = person who works very part-time for CCT but stay with us longer than the average graduate assistant. Funds have been secured for Jeremy Szteiter to fill this position thru June 09.)

The core group

- * makes sure that monthly activities (Sept-June) are organized, publicized, and reviewed afterwards (with notes posted on the wiki);
- * nurtures any interest expressed by attendees in leading an activity sometime in the future and supports the person in making this happen;
- * brings into the core organizing group any regular attendees who are ready to make a commitment to serve in the group;
- * makes the "ning" an active site for sharing of news and activities from alums and other members of the CCT community (email to request to join);and
- * solicits feedback and ideas for activities from other members of the CCT community.

In time, the core group may extend its work so that it also

- * trains members of the CCT community to host "talkshoe" interviews or recorded sessions that are readily available to listen to as podcasts;
- * coaches alum outreach in their local and professional communities in order to:
  - develop CCT as one model of adult/ mid-career education, and
  - publicize CCT so as to attract potential students;
- * draws active attendees into informal advisory group meetings to help keep the CCT faculty abreast of new developments and connected to the activities of the Network.

As support for the network activities, the Program will endeavor to

- * keep the CCT Directory up to date and available to members of the CCT Community (through the ning).

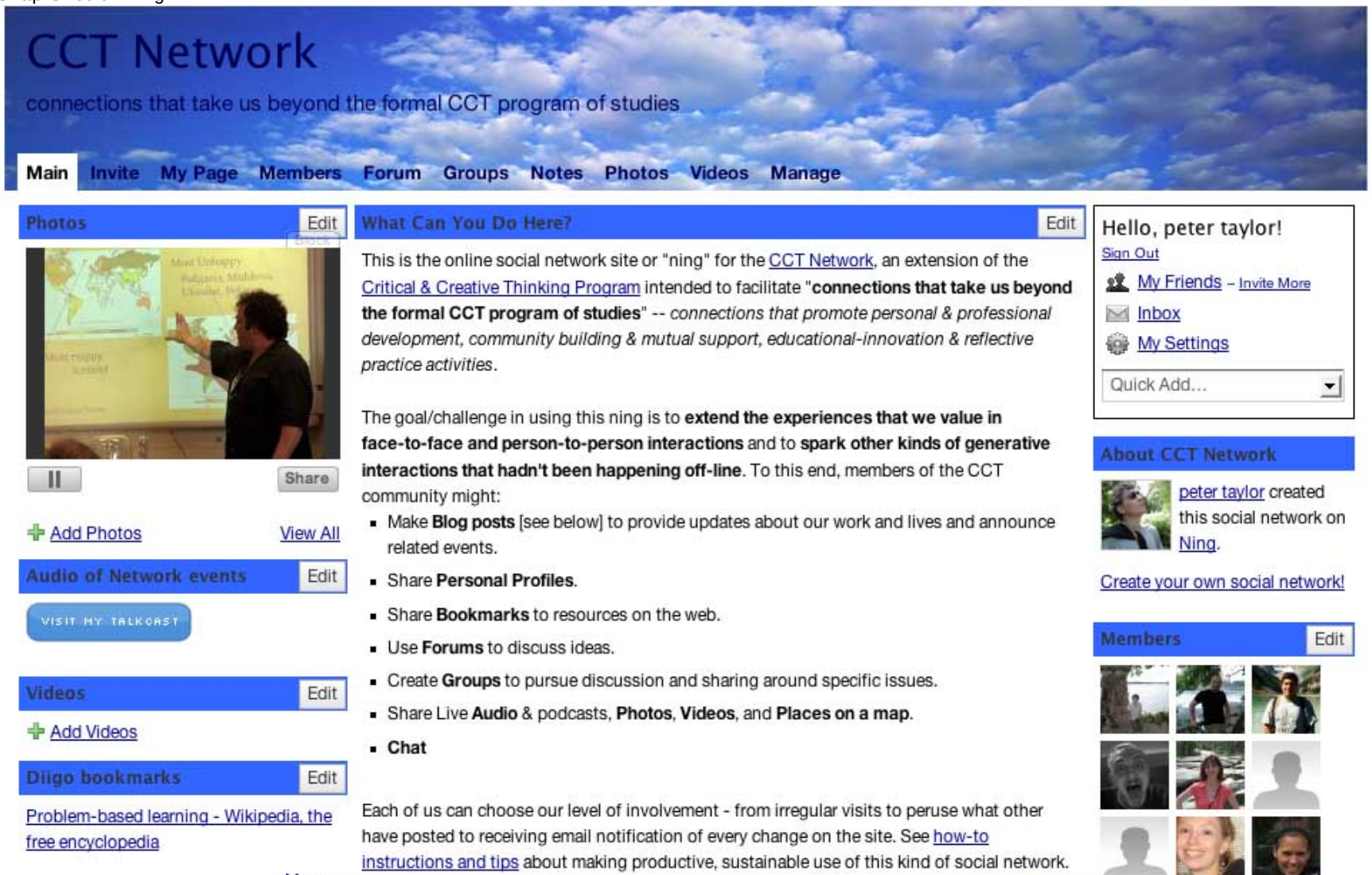
CCT Network social networking site

From a 28 July blogpost on the social networking site

- "My "hidden agenda" is to think of the CCT Network as a sort of agreement between us. That we agree to acknowledge common threads between us, that we agree to continue to share our progress with each other over time, and that we agree to keep in touch periodically. Occasionally, a long time may go by in between visits, but still the CCT Network might be a place where we can find familiar territory and use our built-in relationship as a step to finding deeper ones." (See full posting at http://cctnetwork.ning.com/profiles/blog/show?id=2024178%3ABlogPost%3A761)

Members of the wider CCT Community can request to join

Snap Shot of Ning:



Diigo bookmarks Edit

Problem-based learning - Wikipedia, the free encyclopedia

More...

Notes Edit

Instructions & Tips

Settings: Use "My Settings" at the top

Each of us can choose our level of involvement - from irregular visits to peruse what other have posted to receiving email notification of every change on the site. See how-to instructions and tips about making productive, sustainable use of this kind of social network.

Blog Posts Edit

tara's new job and the application of knowledge

This summer I've been working for the Children's Technology Workshop as an instructor in

Invite More View All

Groups Edit

New England Workshop on Science and Social Change

The New England Workshop on Science and Social Change (NewSSC) organizes innovative, interaction-intensive workshops designed to facilitate discussion, teaching innovation, and longer-term collaboration among faculty and graduate students who teach and write about interactions between scientific developments and social change.

The choice of workshop topics and the innovative, interaction-intensive character of the workshops are designed to attract participants who will develop their knowledge, skills, and interest in promoting the social contextualization of science through interdisciplinary education and other activities beyond their current disciplinary and academic boundaries. Participants are sought from the various areas of Science and Technology Studies, the sciences, and science education and-with an eye to training "interdisciplinarians"-include graduate students as well as more experienced scholars. From 2006 onwards, NewSSC is assembling products from the workshops, which include new syllabi and curriculum units (primarily for college-level courses) or outreach activities (e.g., hosting a citizen forum on a science-based controversy) in an expanding compilation of Online Resources for Science-in-Society Education and Outreach.

Formative (during the process) and summative (after the fact) evaluations of the workshops provide a basis for developing the workshop experience from one year to the next and for establishing a model of workshops that can be repeated, evolve in response to evaluations, and be adapted by participants [evaluations are linked to the webpage for each workshop].

Specific objectives of NewSSC

- 1. Promote Social Contextualization of Science

  To promote the social contextualization of science in education and other activities beyond the participants' current disciplinary and academic boundaries.

- 2. Innovative workshop processes

  To facilitate participants connecting theoretical, pedagogical, practical, political, and personal aspects of the issue at hand in constructive ways.

- 3. Training and capacity-building

    To train novice and experienced scholars in process / participation skills valuable in activity-centered teaching, workshops, and collaboration.

- 4. Repeatable, evolving workshops

    To provide a workshop model that can be repeated, evolve in response to evaluations, and adapted by participants.

See Background and Rationale for each objective, including how the objective will be achieved and evaluated, and selected reactions of participants to the workshop experience.

NewSSC-affiliated Workshops, with links to materials & evaluations

(Increasingly from 2006 on much of the working, "in progress" material has been developed on a wiki, and only the final products and reports are posted on the webpages for each workshop. From 2008 onwards commuity-building and collaborative reviewing of materials is being pursued using a social network "ning" site open to NewSSC participants only. Interactions on the ning may lead to materials for wider circulation, which will be transferred to the wiki and, when appropriate, to these webpages.)

Upcoming

- Spring 2011, "Open Spaces for Changing Science and Society" (15-18 May)
- Spring 2012, "Troubled by Heterogeneity?: Methods and Perspectives from Sciences and Science Studies"

Past workshops

- Spring 2010, workshop 2, "Problem- and case-based learning about biology-in-society"
- Spring 2010, "Where social theory meets critical engagement with the production of scientific knowledge"
- Spring 2009, "Heterogeneity and Development: Methods and Perspectives from Sciences and Science Studies"
- Spring 2008, "Science-in-society: Teaching and engaging across boundaries"
- Spring 2007, "Collaborative generation of environmental knowledge and inquiry"
- Spring 2006, "Ecological restoration as social reconstruction"
- Spring 2005, "How complexities of the social environment shape the ways that

society makes use of knowledge about 'genetic' conditions"

- Spring 2004, "Complexities of environment and development in the Age of DNA"
- Precursor and allied workshops, 1999-2005

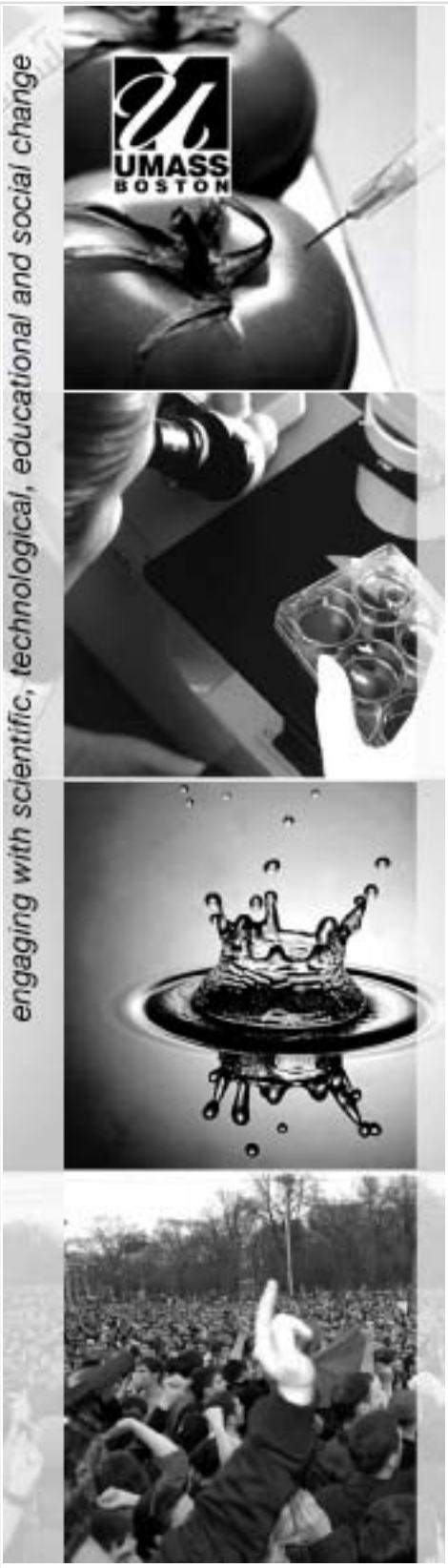
Location: Woods Hole MA, USA

Costs, Arrangements, Application Process

Organizer: Peter J. Taylor, University of Massachusetts Boston, Science in a Changing World graduate track.

Last update 7 October 2010

Expo



Changing Science, Changing Society

An exposition of initiatives, coalitions, and social movements,

past and present,

engaging with scientific, technological, and social change

Friday, April 16, 1-5pm

Ryan Lounge, 3rd floor, McCormack Building, Univ. of Massachusetts Boston (Directions)

Program

- Exhibitors will have display tables and/or posters
- 1-2 & 4-5pm; Exhibitors will have an opportunity to meet and talk with other exhibitors (learn from each other, exchange contact info, etc.)
- 2-2.45pm: Short presentations on "Engaging with scientific, technological, and social change"
    - Peter Taylor, Coordinator of Science in a Changing World graduate track, UMass Boston, "Welcome"
    - Winston Langley, Provost, UMass Boston
    - Jonathan Beckwith, Harvard Medical School, remembrance of Rita Arditti
    - Marisa Matias, Member European Parliament, Portugese community activist and researcher around environmental health issues
        - "Lessons from the mobilization against export of waste from the European Union to Brazil"
    - Raúl García Barrios, National Autonomous University of México, Cuernavaca--Community activist and researcher around watershed restoration and landfill issues
- 2.45-4pm: Go around--Opportunity for each exhibitor to convey something distinctive that they/their group has done and something that

they hope to develop more in the future
- Light refreshments will be available
- No charge for registration

Hosted by the new Science in a Changing World graduate track, http://www.stv.umb.edu/SICW.html, with support from the CCT Forum and the Office of Graduate Studies.
Email inquiries: sicw@umb.edu

Expanding List of Exhibitors

Acknowledging affect and "non-science" social processes into high school science curricula
Boston Science Partnership, http://www.Bostonscience.org
Chinese College Students' Perspectives towards Internet Filters and Online Sex Industry--A Qualitative Investigation
Community Engagement Core, Horizon Health Disparities project, UMass Boston
Conflict of interest in the development of DSM categories
Connecting science and PTSD recovery: Dialogue for veterans
Council for Responsible Genetics, http://www.councilforresponsiblegenetics.org/
DataCrítica, "critique of statistics and promotion of the principled use of statistics for social critique," http://uprm.info/datacritica/index.php/dc
Deepening Ethical Engagement and Participation in Emerging Nanotechnologies (DEEPEN)
Genetics and Society Working Group, http://beck2.med.harvard.edu/jon_genetics_society/genetics.html
Green Boston Harbor Project, http://www.umb.edu/umb/marineops/gbhp/
Herdict, aggregates reports of inaccessible websites, http://www.herdict.org
Medical Information Systems Unit, Boston Medical Center
Lowell Center for Sustainable Production,http://www.sustainableproduction.org/
Museum Institute for Teaching Science (MITS), http://www.mits.org/
Museum of Science's Forum program, engaging laypeople in conversations with scientists and policymakers
New England Workshop on Science and Social Change, http://www.stv.umb.edu/newssc.html
Partnering for Development: A Community-Centered Service Learning Project in Rural Haiti
Problem-based learning about Scientific & Political Change and Biomedical issues
Professional Science Masters initiative at the University of Massachusetts Lowell (brochure)
Promoting health equity on an urban campus through undergraduate seminars
Science in a Changing World graduate track, http://www.stv.umb.edu/SICW.html
Social Media and Information Technologies for Human Interaction and Communication, http://socialtechnologiesresearch.com/ , http://prezi.com/k0stqj4_ps-j/cfha-2009/ (click in bottom right for autoplay)
Sustainability initiatives at UMB, a history
Swimming with Eelgrass: integrating human and natural systems in Boston Harbor
Transmission Project, amplifying public media, http://www.transmissionproject.org
Union of Concerned Scientists, http://www.ucsusa.org

Information from others who could not attend, but would like to have, http://sicw.wikispaces.umb.edu/ExpoExtras

Thinking *for* Change Fieldbook

Techniques and illustrative cases for fostering
critical and creative thinking and reflective practice developed by
Thinking *for* Change associates in courses and other forums

Table of Contents

- Multiple Intelligences: The language people use to communicate ideas, particularly verb choices, are indicators of which intelligences they may prefer to use. An instructional model is presented that demonstrates how such language can be utilized to design lessons that promote thinking and understanding through eight different intelligences.

- Problem-based Learning in Science: Conversations with leading biomedical scientists are catalysts for students to conduct their own interest-based inquiries using a ten step instructional model for guiding them in the process of problem-based learning.

- Small Group Roles: that don't divert participants from participating and ensure everyone reflects on the activity.

- Suspending Judgement: How Critical and Creative Thinking can lead to more effective business communicatin and decisions.

- Thinking Steps: Six steps to follow in the thinking process.

- What Produces Re-seeing?: how do questions that retrospectively seem obvious ever occur to us?

Summary or Substantive Statement

(on a topic or kind of resource)
(see also Exchange & Inquiry within courses)

Critical Thinking

- Critical Thinking as a Journey

Dialogue Process

Methodological Belief and Doubt

Multiple Intelligences

Phases of Research and Engagement

Problem Based Learning

- Framework for Exchange and Inquiry

Reflective Practitioners Portfolio (email jhrcoe@yahoo.com for password)

Re-membering Conversation & Outsider Witness Re-telling

Taking Yourself Seriously:Processes of Research and Engagement

Teaching/Learning Tools of Peter Taylor

Thinking for Change Fieldbook

- **Collaboration:** Dialogue Around Written Work | Effective Teamwork Instead of Individual Competition | Gallery Walk activity | Guidelines for Dialogue | Suspending Judgment in Effective Teamwork | Assigning Roles in Small Group Work
- **Teaching and Learning:** Active Learning in Museums | Computers in Education | Problem-Based Learning in Science | Guidance Requested: A Problem-Based Learning Case Study | More Assessment, Less Grading
- **Approaches to Thinking:** Critical Thinking Manifesto | Multiple

Intelligences | Six Steps in the Thinking Process | New Insights Through Re-examining Obvious Questions

Virtual Office

Workshop Processes

- Qualities of well-facilitated workshop | Sense-making workshop guidelines

Taking Yourself Seriously

A Fieldbook of Processes of Research and Engagement

Peter Taylor and Jeremy Szteiter ©
Work in Progress, 10 July 2010

I. PHASES AND CYCLES

- A. Overview (=origins of the book and how to use it, overviews and interrelationship of the two approaches, and prefiguring of essays in part IV)

- B. Phases of Research and Engagement (without details of tools/ processes)

- C. Action Research Cycles and Epicycles

II. TOOLS AND PROCESSES (in alphabetical order, preceded by an annotated list)

III. ILLUSTRATIONS

- A. Illustrations of Phases (JS's project)

- B. Illustrations of Cycles and Epicycles (JS's project)

IV. CONNECTIONS AND EXTENSIONS

- A. Teaching/Learning for Reflective Practice

- B. Action Research and Participation

- C. Commentaries from students

- D. Resources to complement and supplement what is included in this book

[pdf version, 2 Sept. '10]

home

Science in a Changing World

This initiative at UMass Boston facilitates learning and teaching innovation, research and public engagement, discussion and collaboration among faculty and students concerning interactions between scientific developments and social change. *Science in a Changing World* (SICW) connects a number of programs of study at the undergraduate and graduate level and other educational and outreach projects. These projects are documented on this wikispace and on associated Wikis & Webpages:

- Science, Technology & Values (STV) undergraduate Program
  - "...offers students the opportunity to examine historical, socio-political, cultural, philosophical, and ethical dimensions of science and technology. It encourages both science and non-science students to analyze, in a focused way, the impact of science and technology on other social institutions and the impact of those institutions on science and technology."
- Science in a Changing World: M.A. and graduate certificate -- now accepting students
  - "...designed for educators and other concerned citizens who want to explore the relationships among new developments in scientific knowledge, in education, and in society. Innovative and inspiring instructors arrange course material, classroom activities, teaching/learning interactions that provide students an opportunity to learn about science in its social context, to gain a set of models for their own educational or activist work, to discuss practices and philosophies of education and social change, and to undertake research with a view to engaging with science in a changing world."
  - Formally a track in the CCT program. See also steps and plans, CCT Graduate Program at UMass Boston, and Critical & Creative Thinking/ Reflective Practice wiki
- InterCollege Faculty Seminar in Science & Humanities
  - A forum for discussion and interaction among faculty at UMass-Boston. Faculty from different disciplines and colleges come together to focus on topics of common interest, exchange ideas, renew their intellectual energy, and advance their work in a spirit of adventure and collaboration.
- Twitter site for micro-blogs about S.I.C.W. matters

twitter

- ScienceChanges: Patterns among relatives: Classroom activity unpacks simple picture of science=empirical observtn & rational interpretn: http://t.co/q7hCHD0
  Jan 2, 2011 6:00 am

- 2008 Proposal for a "Transdisciplinary Research Workshop"
  - In the proposal, a group of faculty and graduate students has sustained interaction about their research interests over a semester (like ISHS), but with topics shaped to support the University's research cluster initiative.
- New England Workshop on Science & Social Change (NewSSC)

    - "...organizes innovative, interaction-intensive workshops designed to facilitate discussion, teaching innovation, and longer-term collaboration among [U.S. and international] faculty and graduate students who teach and write about interactions between scientific developments and social change."
- Online Resources for Science in Society Education and Outreach
    - educational and public outreach resources generated by NewSSC.
- Health in Society Research discussion group
    - Monthly meetings for interaction among UMB faculty & doctoral students who have (or are developing) an epidemiological focus (broadly construed) to their research and teaching.
- Education for Sustainability at UMass Boston, 2002-3
    - Workshops to help faculty produce curricula that develop students' ability to:
        - appreciate and monitor the state of the environment, social structure, human health —to become "environmentally literate";
        - understand and analyze the complexities of phenomena that link economics, politics, culture, history, biology, geology, and physical processes;
        - be involved in dynamic, vigorous exchange across the traditional disciplinary boundaries within and between natural and social/ human sciences; and
        - work within specific communities to facilitate self-conscious, reflective engagement with linked socio-environmental processes.
- Emerging/possible cross-institutional collaborations
    - Course offered through Boston-area Graduate Consortium for Women's Studies
    - Participation in workshops & seminars around UMass Lowell's Center for Sustainable Production
    - Participation in the "North-South Doctoral Program in Life Sciences, Ethics, and Society" planned bythe University of Coimbra, Portugal
    - Provost's partnership with the International Academy of the Life Sciences, Berlin

The SICW initiative is co-hosted by the STV and CCT Programs. For more information, contact peter.taylor@umb.edu, STV & CCT Director.

The original design of the "Exchanges & Inquiry" part of this wikispace, as well as the research and writing of users pjt & jancoe were, in part, supported by the National Science Foundation under Grant No. SES-0327696. The New England Workshop on Science and Social Change and development of the section on Online Resources for Science-in-Society Education and Outreach was supported by the National Science Foundation under Grant No. SES-0551843. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.
General instructions for using the wikispace

sicwaspsm

Science in a Changing World graduate program

Checklist for Development as a PSM

last update 28 Nov 09

Checklist for developing PSMs	Science in a Changing World
The focus area could be interdisciplinary or be a non-traditional focus where there is existing faculty expertise and interest. The degree is named for the focus area, not for the discipline(s) involved.	Science in a Changing World "participate in questioning and shaping the direction of scientific and social changes, as well as to teach and engage others to participate in this important endeavor"
Assure faculty enthusiasm for the new degree, including commitment by regular department faculty to provide bulk of instruction.	10 core and 7 associate faculty; 12 tenured & 3 others with extended, renewable contracts; 8 with appointments in science departments (incl. 7 of the 10 core). All instruction done by regular faculty as part of regular teaching assignments, but some additional electives may be offered by part-time lecturers through Continuing Ed.
Win high-level institutional commitment to master's level education, including central coordination of all PSM programs at level of dean or above.	SICW graduate track approved June '09
Prepare business plan projecting both expenses and revenues, and showing how and when each degree program can become self-sustaining based on tuition revenues, corporate support, and university support.	Because all instruction done by regular faculty as part of regular teaching assignments, expenses are minimal. Continuing Education funds half-time assistant program coordinator, part of whose duties are SICW admin, promotion, and alum relations. Dividend from past courses taught through Cont. Ed. deposited in an ESS account and earmarked for SICW publicity & activities (incl. community-building, see below).
Curriculum development	
Design a curriculum with a majority of coursework in graduate level science and/or mathematics in one or more disciplines.	33 credits. 18 credits in Science. Crosslisting in Science departments to forestall any questions about "science" status of required courses.

Develop intense identity-building or "branding" experience for PSM's, including team project for entering students.	Community-building through continuation of on-campus Inter-college faculty Seminar in Humanities and Sciences and off-campus New England Workshop on Science and Social Change
Encourage business/industry internships or equivalent.	Emphasis on non-profit and community engagements. Outreach building from Fall '09 to the April '10 "Expo" and beyond.
Design exposure to cutting-edge research issues and equipment, for example, by lab rotations.	Internships to be developed, especially with non-profit organizations (identified through Expo participation).
Conduct seminars/colloquia jointly for all PSM students.	Inter-college faculty Seminar in Humanities and Sciences
Teach writing/communication/negotiation/ consensus-building and other workplace assets.	Yes. (CrCrTh692 & 693 are required.)
There should be a reasonable number of existing courses which could be adopted or adapted for the program.	All SICW courses are existing courses. A proposal to make Problem-Based Learning focused on SICW issues as a course in its own right is under development.
Require final project, often team experience, in which meeting a schedule really matters (in contrast to the open-ended nature of much university research).	Yes. The program of studies ends with three required research and writing courses.
Degree could be completed in approximately two years.	Expect 2.5 years (because most UMass Masters students are part-time students, full-time workers).
Apply to the Council of Graduate Schools for recognition as a Professional Science Master's program.	Planned for AY '10-11
Program Management	
Appoint personnel or hire staff coordinator to handle liaison to business and industry; publicity; recruitment; student services; placement.	SICW admin. & promotion is part of duties of assistant program coordinator (funded through Continuing Education).
Win rapid approval of new degree programs by state Regents and other gatekeepers.	-- (Not required because SICW is a track in an existing program.)
Create management teams dedicated to recruitment of students and placement of graduates.	Program director, assistant (see above), and core faculty.
Set up systems to keep track of graduates and network them.	Extension of existing alum database, directory, online social network, and monthly meetings
Keep contact with other professional master's programs around the country.	Through UMass system-wide PSM coordination & COGS.

Set up systems for assessment and quality control.	Extension of existing system of faculty meetings and wiki coordination, annual reports to Graduate School, and 7-year program ("AQUAD") reviews.

- Self-study report as part of 7-year (AQUAD) review of CCT

    - Review Committee's report
    - CCT faculty response to Review Committee report
    - Education Dean's response to Review
    - Graduate Dean's response to Review
    - CCT faculty rejoinder to Deans' responses (No response received from the Provost)

- Mar. '04 - After reopening admissions to CCT in December the Graduate Dean put them back on hold, but then reopened them after hearing that Nina Greenwald would have a full-year position for '04-05 while Peter Taylor, the Program Coordinator, was on sabbatical. The CCT faculty continues to seek clarification of any other factors affecting the status of the Program.
- April '04 - Worksheet prepared for NEASC accreditation of the University
- Aug. '05 - Nina Greenwald will again have a full-year position for '05-06 while the Education Dean seeks to reinstate a second CCT faculty line.
- Sep. '05-- CCT numbers & strategy, updated Feb. '06.
- Dec. '05 - Nina Greenwald will have a three-year contract for '06-09.
- May '07 - Status report on CCT from acting Coordinator, Peter Taylor, to GCE interim Dean. [No response received by interim or incoming Deans.]
- Sep '07 - Nina Greenwald moves to part-time through '08-09 and Peter Taylor resumes coordinator role.
- Nov. '07 - updated AQUAD plans
- Spr & Fall '07 - Developments that allow CCT to serve students with the resources and student numbers it has include: offering certain required courses 1 semester in 3; offering electives on a 2-year cycle; all CCT faculty taking turns to lead synthesis seminar.
- Spr '08 - Annual report
- Spr '09 - Annual report
- Spr '10 - Annual report

Science in a Changing World

Series of steps to promote this graduate certificate focus and build on faculty strength in this area in the M.A. program
Peter Taylor, 30 Nov 07, updated 31 May 08 & 3 Oct 08, and 10 June 09 and 11 October 09

Description of emphasis/ focus

One area of emphasis in the CCT program is on "science in the context of conceptual development and social change." This is reflected in the "Science in a Changing World" track for the M.A. and Certificate as studies "designed for educators and other concerned citizens who want to explore the relationships among new developments in scientific knowledge, in education, and in society. Innovative and inspiring instructors arrange course material, classroom activities, and teaching/learning interactions that provide students an opportunity to learn about science in its social context, to gain a set of models for their own educational or activist work, and to discuss practices and philosophies of education and social change."

Steps

1. Course offerings. Stretched out cycle for required courses allowing PT, CS and AM to teach CCT and related electives in this area (as well as reducing chances of course cancellations). In partnership with other programs (esp. Honors, STV, & PPol), aim for 2-3 sections per year, including summer. [Pursue the partnerships, Cross-listings of CCT640 & 650 so that the courses serve as content courses for teachers seeking licensure, Consult with Sci. Ed. faculty to bring attention to these courses. Clarify whether AM & CS's other departmental commitments will allow them to recruit students for and teach electives.]

2. Build recognition in the Boston / New England area for CCT-centered work in this area through:
a) Cont. Ed. publicity of this graduate track [arrange to appear on CCDE website] -- on hold [10/09] until some of the courses are offered thru CCDE
b) Continue the annual New England Workshop on Science and Social Change. Budget CCT funds (from CCDE) to provide essential facilities charges for this workshop (at Woods Hole) so that time-consuming grant applications are not absolutely essential (up to $1200/year);
c) PT co-teaches a graduate seminar on science-in-society (with innovative, interdisciplinary pedagogy) every few years through Women's Studies & the Boston area Graduate Consortium in Women's Studies (starting spr '09;

continuing spr '11)
d) PT continues to teach an epidemiology for non-specialists grad. course that is open to UMB & UML students in policy, gerontology, nursing -- now cross listed with Nursing
e) CCT 649, Scientific and Political Change (previously, Science, Technology & Policy) promoted as a Policy course to the Intercampus Marine Sciences School.
f) PT applies for major grant for research and outreach around complexities of genes, environment, health, and development.
g) SICW-related activities assembled onto one wikispace [done] sicw.wikispaces.umb.edu (now hosted by umb.edu so no subscription needed).

Assistance
3a. Dedicate one of the CCT AAs to assistance on these steps (e.g., #4, 6, 8, 9, 11).
3b. Get guarantee that CCT keeps its two 5 hr/week GAs. (Reduced to one for 09-10)
3c. Secure funds for 10 hour/week assistant who would work through the summers and stay with us beyond graduation (say for 2-3 years in total) (OK through Summer 10 -- now converted into a 50% CCDE-funded program assistant position, starting mid-Oct. '09).

4. Publicity assistance to JFS and cross-listing with PPol [done] to increase chances that her summer elective runs. [Find replacement instructor?]

CCT measures
5. SICW track supercedes the substitution options below. [Track approved June '09]
5a. Advertise the substitution option for students specializing in this area of CCT 649, Scientific and Political Change, for the foundational Phil course.
5b. Advertise the substitution option for students specializing in this area of CCT 652, Children and Science, for the foundational Psych course. [* discussion needed by CCT faculty?]

6. Promote at-a-distance options for SICW M.A> and certificate track to librarians, community researchers, college teachers, teachers seeking professional license. Highlight innovative PBL and Action Research teaching in 611, 645 (Biology in Society), 649, 693 (Action Research), WoSt 597

7. Advertize that online SICW M.A. and certificate students can complete the M.A. through participation in courses at a distance (e.g., PT's sections: 640, 645, 649, 692, 693, 694, PPol 753, WoSt). (Require portfolio to be reviewed before approving the transfer from certificate to MA.)

- "Several courses are offered in online sections (e.g., CRCRTH 601, 602, 612, 616, 618). These sections are intended primarily for

Certificate and non-matriculated students; CCT M.A. students need permission of their advisors to take them in place of face-to-face sections. Several other courses, however, can bring in a small number of students by speakerphone (or "voice over the internet") during regular class meeting times. (Contact the Program for details and the Program Director for approval.) It is therefore possible to complete the entire M.A. at a distance by: undertaking the Certificate through online courses; getting approval to transfer to the M.A. program; and participating in the remaining regular classes at a distance. In no case may students count more than five on-line courses from UMass Boston toward their CCT M.A. degree."

(publicity for SICW)

Interdisciplinary initiatives serving UMB

8a. Continue Inter-college faculty Seminar in Science and Humanities.

8b. Continue Health In Society Research Discussion Group (started Nov. '07)

8c. Submit proposal for Transdisciplinary Research Workshop to support the Research clusters (submitted, but on hold [Fall '08] until clusters get going).

8d. Secure UMB recognition for SICW efforts/initiative/umbrella coordinated by STV and CCT.

8e. Explore Professional Masters status for SICW.

9. Participate in revived faculty curriculum development workshops under Education for Sustainability (in conjunction with ES Program). [Funds for stipends would help.]

10. Participate as guest lecturers in revived and revised Science in a Humane World and in other courses.

11. Supervise qualified, experienced CCT/SICW students who wish to teach undergraduate Gen Ed seminars.

SICWDevelopment

Development of Science in a Changing World graduate program

Notes & Plans

last update 4 Jan 2011

Moving toward meeting criteria for SICW to be certified as a Professional Science Masters

- innovative graduate degree program that is an emerging or interdisciplinary area of science, mathematics or technology.
  - SICW Track approved June '09. Recommended 6 of 11 courses in science. Recommended 3 of 11 in a "science-plus" area
  - Fall '09: Moving through approval process, Recommendations -> Requirements re: No. of science-prefix courses , internship & science-plus (minimum 3 of 11 courses) (see below) -- approved May '10 (confirmation needed)
  - Future: Submit for approval: exact number of hours for internship once this is clear
- contains an additional component in business, management, communications or other professional aspect (teamwork/leadership skills, policy, regulatory issues, entrepreneurship) developed in concert with business, industry, non-profit or government entities.
  - Science-plus = Research, Writing, and Evaluation for Civic Engagement and/or Collaborative Processes and Problem-Based Teaching around current controversies involving science and technology.
- provides internship (for full time) or other research/project (for currently employed) to connect students to real world applications and potential future employment.
  - SICW has internship requirement (subject to final approval [approved; see above]). Network for internships being built in time for students (the first of whom should matriculate Spr' 10)
  - Three required research & engagement courses
- has in place or potential to have in place an external advisory board to guide the program development and offer opportunities for internships.
  - Advisory board to emerge from efforts to build network for internships and program promotion (see below) -- not yet formed.

See detailed checklist for development of SICW as a PSM

Faculty associates and advising roles

- 10 core faculty for SICW track: 7 have science-department appointments; of the other 3, one has a science Ph.D., one a philosopher of science and environmental ethics, one an innovator and author in area of problem-based learning, esp. in biomedicine.
- AY 09-10: establish a larger set of advisors from across the University (7 additional associates as of Nov. '09)
- Meeting of core faculty foreshadowed for late Jan '11 (before the AQUAD review site visit on 1 Feb).

Course offerings and approvals

- Required courses to be offered on a 2-year rotation (given that students are expected to take a minimum of 2-2.5 years to complete degree) -- started spring '10, involving partnerships with Honors to ensure sufficient students to run the courses until SICW numbers grow.
- Required science courses to be crosslisted with science prefixes (so as to forestall questions about their status as science courses) -- done for CCT652, but not 650
- Fall '09: Moving through approval process, Minor name change of Mathematics Thinking Skills to Mathematical Thinking -- done, but needs to get into WISER
- AY 09-10: Several required foundation courses and research & engagement courses developed so that they are available either online (CrCrTh 692, 693) or at-a-distance (where students join regular class meetings by audio link) (CrCrTh 640, 645, 649, 692, 693, 694; PPol 749, 753). Online version of CrCrTh619, biomedical ethics, each summer, starting 2010. CCT650 & 652 to develop at-a-distance option for 2013.
- Starting Spring '11, SICW courses offered at slightly higher frequency so students can complete Masters in 2.5 years (face to face or online or a combination). (Online option was a condition for U.C. funding of 50% staff assistant [see below].)

Extra-curricular Activities

- Continuation of Inter-college faculty Seminar in Humanities and Sciences
- Continuation of New England Workshop on Science and Social Change
- Continuation of Science in a Changing World wiki

Marketing & Promotion

- Fall '09: Bookmarks, poster, twitter presence, email listservs, preparation for Spring '10 Expo
- Spr '10: "Changing Science, Changing Society" Expo of non-profit, government, business, educational, and community initiatives to promote wider "participat[ion] in questioning and shaping the direction of scientific and social changes"
- Summer & Fall '10: Responses to inquiries and SICW presence on CCDE/UC website, but additional promotion on hold while Track Coordinator completes two program reviews.
- Spr '11:New assistant (see below) to create and implement marketing plan, as well as shepherd inquirers through to application and matriculation.

Revenue

- Funds in the ESS account of the CCT Program earmarked for SICW publicity & activities (incl. NewSSC). (Source of funds = dividend from courses taught through Cont. Ed.)
- 50% assistant to the SICW track, Felicia Sullivan (PhD student in Public Policy) starting 1/23/11, funded by U.C. (renewed annually if enrollments sufficient).

Institutional support & recognition

- Provost Langley initiated the working group, from which the SICW track proposal emerged.
- Fall '09: Request to be included as part of UMass system's PSM initiative.

- AY 10-11: Application to be certified as a PSM by Council of Graduate Schools -- not yet submitted; advisory board and internship options to be established first.
- Spring '11: AQUAD review of CCT program includes SICW track.

Diversity in and via CCT

22 Oct '09, with additions as of 12 Nov. '09 and 3 July '10

	Where we are	***Future steps?***
Faculty		
Regular faculty	No CCT search authorized since 1998	no signs of a search -> not a route to more faculty diversity
	Except CCT interests were tacked on to Teacher Ed search in '04 -> JA-V hire. JA-V was able to w'draw from CCT when NLG was hired full-time for 04-05.	
	Denise P interested to teach in CCT -> brought in when a course opening occurred (EDCG647/ CCT630 -- NLG had 1st dibs on this)	EDCG647/CCT630 to be offered every 2nd year
	Larger set of synthesis advisors/ readers recruited (which include faculty of color), but students not using these faculty.	revitalize this. collaborate with LTET faculty.
Part-timers	2-4 face2face courses/year, w/ 1 having faculty of color as co-instructors	
	1 special topics course taught by a GRC specialist (Emmett Schaffer) in '01, but was not approved by GS as a regular offering	
	6 online instructors, no faculty of color	Faculty of color chosen to teach online section of Biomedical Ethics, Summer '10
Courses	CCT627 Anti-racist & Multicultural Ed.	offered every 2nd year
	EDCG647/CCT630 Multicultural Lit/ C&C in Lit & Arts as taught by Denise P.	to be offered every 2nd year?
	Gender, Race & Complexities of Sci & Teach, taught by PT thru cross-campus consortium	To be offered every 2nd year
	CCT618 in summer is 1/3 about Diversity Awareness	
	CCT693 (Action research) had whole-class projects on enhancing diversity in/thru CCT in 02-04. Course no longer has a whole-class project.	
	Other contributions from other courses?	new readings in other courses? guests?
Support	Synthesis completion & graduation rate has dropped since '03, esp. in students of color -> Support to Completion	Stricter admission standards?

	Writing Support (grad. assistant in 08-09; support group in 09-10)	continue & recommend participation to students who need more writing support
Teacher-student interactions		Transmit feedback to colleague in question? Or cut off feedback & insist that student approach the faculty member directly? Personal audit of cross-cultural/ cross-racial relations in the classroom and other aspects of our courses
Larger plans	AQUAD plans (since '00) specify a str. planning process around enhancing diversity, but hasn't happened	
	Student, Michael Ruf, prepared a portfolio in '01-02.	

University of Massachusetts at Boston
Public Policy Program, McCormack Graduate School of Policy Studies
Critical & Creative Thinking Program/ Science in a Changing World, Graduate College of Education

Scientific and Political Change

(formerly: Science, Technology & Public Policy)

PPol G 749/ CrCrTh 649
Syllabus, Spring 2010

Instructor: Peter Taylor, Critical & Creative Thinking Program
Email: peter.taylor@umb.edu
Phone: 617-287-7636
Office: Wheatley 2nd flr 157 (on back corridor parallel to main long corridor)
Class meetings: Weds 4-6.30pm
Office/phone call hours: Tuesday 3.20-4, 5.30-6.30pm; Weds 3-3.40pm by sign up (http://ptaylor.wikispaces.umb.edu/PTOfficeHours) or by arrangement
Course Website:http://www.faculty.umb.edu/pjt/749-10.html
Course wiki: http://ppol749.wikispaces.umb.edu
Class email list: Emails sent to ppol749@googlegroups.com will go to everyone in the course.
Diigo group: http://groups.diigo.com/group/ppol749 (for evolving annotated bibliography)

Catalog description

Prior to WW II, the American government played a relatively small role in the support of science, especially outside of its own institutions. That situation changed dramatically with the war and the Cold War that followed. We explore how these events transformed the role of science in American life, vastly enhancing the prestige of scientists, and shaping the extent and the nature of federal involvement in science. These and later developments, including the commercialization of academic research, raise important questions about the appropriate role of science and scientists in a democracy. In particular: How can we reconcile the need for scientific and technological expertise on the one hand, and for the democratic control of science on the other? We consider different theoretical approaches to this issue, and illustrate the dilemmas it poses with a number of empirical examples.

Course Overview

After an introductory session in which students identify their personal intellectual and professional interests and are introduced to "Problem-based learning" (PBL), the course consists of four 3-week PBL units. The PBL approach allows students to shape their own directions of inquiry and develop their skills as investigators and prospective teachers. At the same time the PBL cases engage students' critical faculties as, guided by individualized bibliographies co-constructed with the instructor and by the projects of the other students, they learn about analyses of the political influences on the development of science and technology, and, reciprocally, of influences of such

developments on political processes and possibilities.
The broad topics covered by the PBL units are:

1. What science-policy connections are needed to improve responses to extreme climatic events?
2. Science and democracy: Who is included/excluded in shaping research and its applications? In what ways is that made to matter (included and excluded parties)?
3. Addressing uncertainty: Comparatives perspectives -- To whom and in what circumstances is it important to reduce uncertainties in the predictions and applications of research? A comparison of policy development in U.S. and Europe concerning new genetic technologies.
4. Education and civic engagement: How to teach and engage others to participate in questioning and shaping the direction of scientific and social changes?

SECTIONS TO FOLLOW IN SYLLABUS:

Texts and Materials
Assessment and Requirements
Sequence of Classes

(*By the end of the semester, the schedule of classes will be fleshed out with links to the PBL units and the projects and bibiography that emerge on the wiki and diigo.*)

Additional material on the course wiki includes:

Notes on assignments, other expectations, grading system
Evolving Bibliography (extracted from diigo annotations)
PBL Units, with links to student wikipages
Bibliographies from past courses

PREREQUISITES: Graduate standing or permission of instructor

TEXTS AND MATERIALS

Dickson, D. (1984). The New Politics of Science. New York, Pantheon, reprinted University of Chicago Press, 1988.
Hackett, E., O. Amsterdamska, et al., Eds. (2008). The Handbook of Science and Technology Studies. Cambridge, MA, MIT Press.
Not in bookstore - purchase online

ASSESSMENT & REQUIREMENTS

REQUIREMENTS: A sequence of written assignments (which will average 800 words) and presentations on the PBL cases. As the course evolves more detail about the assignments will be provided by email and on the course wiki.

Participation requirements included active participation based on preparation between classes, interaction between classes through email,

conferences on your assignments and projects, commenting on each other's drafts, and adding an annotated reference to the evolving diigo bibliography each week. It is expected that you will spend at least 6 hours per week outside class time reading, researching, and writing.

Grading: An unconventional but simple assessment is used. The written assignments are commented on but not graded. Students receive the full grade for the assignment after they revise thoughtfully and resubmit in response to comments received on the initial submission. This system keeps the focus on interaction around written work and presentations that emerge from participation in the unfolding dynamics of the course. The assessment system also accommodates the contingencies of student's lives by allowing a fraction of assignments to be skipped without penalty. Students keep track of their submissions and revisions on an assignment checklist.

Details on guidelines are given in the Notes on assignments, other expectations, grading system, but in brief:

Written assignments and presentations (2/3 of grade)
6 points for each assignment submitted and revised in response to comments and for each presentation made up to 54 points max, i.e., 9 of the 12 completed.

Participation and contribution to the class process (1/3 of grade)
1 point each item completed, up to 27 max (i.e., 27 of the 36 items)

a. Participation in class meetings based on Preparation between classes (14 items)
b. Syllabus quiz before week 2.
c. Annotated reference or resource (=person, organization...) added (with annotation) to the evolving diigo bibliography (each week except 1 & 14) (=12 items)
d. Email contribution to discussion on the course ppol749@googlegroups.com email listserv or exchange with the instructors (at least 5 weeks = 5 items)
e. Minimum of two in-person or phone conferences on your assignments and projects--one before session 5, the other before session 11 (= 2 items)
f. Work with another student commenting on each other's last project report
g. Assignment checklist kept up to date and submitted in week 12 or 13.
h. EXTRA-Participation in Changing Science, Changing Society Expo at UMB on 16 April.

Overall course grade
If the points for writing and participation add up to 80 (which gives an automatic B+) the rubric to follow is used at the end of the course to add points (to move above a B+).
For each quality "fulfilled very well" you get 2 additional points. If you "did an OK job, but there was room for more development/ attention," you get 1 point.

1. A sequence of assignments paced more or less as in syllabus (and revisions timely),
2. often revised thoroughly and with new thinking in response to comments.
3. Projects innovative, well planned and carried out with considerable initiative, and
4. indicate that you can extend tools and processes from the course to your specific situation so as to engage with "political influences on the development of science and technology, and, reciprocally, ...influences of such developments on political processes and possibilities."
5. Written assignments and project report clear and well structured,
6. with supporting references and detail, and professionally presented.
7. Active, prepared participation and building class as learning community, including

8. probing of other students' KAQs, maps, and work-in-progress presentations
9. participation in student-led activities, and
10. contributions to the email listserv and evolving annotated bibliography.

Overall course points are converted to letter grades as follows: A > 95%, for A- 87.5-94.5, for B+ is 80-87.4, for B is 72.5-79.5; for B- is 65-72.4; for C+ is 57.5-64.5; and C 50-57.4%.

ACCOMMODATIONS: Sections 504 and the Americans with Disabilities Act of 1990 offer guidelines for curriculum modifications and adaptations for students with documented disabilities. The student must present any adaptation recommendations to the professors within a reasonable period, preferably by the end of the Drop/Add period.

Students are advised to retain a copy of this syllabus in personal files for use when applying for certification, licensure, or transfer credit.

This syllabus is subject to change, but workload expectations will not be increased after the semester starts. (Version 27 Jan. '10)

SEQUENCE OF CLASSES

Classes will begin with sharing of highlights of readings and annotations added to the wiki (except weeks 1, 14, and weeks in which there are presentations).
More details about preparation for the classes and the PBL cases will be provided through links on the wiki and by email.

Week 1, 1/27, Introductions
Instructor and Students identify personal, intellectual, professional interests and introduce themselves:

a) in relation to the course title and description (worksheet); and
b) by formulating questions in response to audio recordingof Boal, "Climate, Globe, Capital."

First look at "KAQ" (Knowledge claims-Actions that follow-Question for inquiry) framework for teasing out diverse inquiries, in this case inquiries based on students' initial responses to the audio.

Preparation for class 2:
Complete syllabus treasure hunt to acquaint yourself with, and raise questions about requirements, the wiki, diigo, and the syllabus.
Read Case 1, "Science-policy connections to improve responses to extreme climatic events: Briefings requested-quickly!"
Use KQ part of KAQ to identify questions for inquiry and begin that inquiry (Assignment 1).

Week 2, 2/3, Case 1. Probing each other's KAQs
Discussion of questions raised about requirements, the wiki, and the syllabus
Check-in (=succinct reports) on findings from any inquiry between classes
Introduction to the A part of KAQ
Workshop on generating questions, inquiring into them, and designing the briefings required by case 1 (KAQ worksheet)
(bring laptop if you have one)

Preparation for class 3: Pursue inquiries based on KAQ worksheet. Mid-week check-in on progress. Prepare work-in-progress presentations (Asmt. 2)

Week 3, 2/10, Case 1 work-in-progress reports and dialogue session
Work-in-progress presentations (Asmt. 2; 10 minutes, including time for questions)
Dialogue session about the ways we can meet the "[national policy analysis] group's interest in making an informed and informative contribution to public discussion in the aftermath of the Copenhagen summit failing to produce a binding accord." [Not conducted because of snow day]

Preparation for class 4: Prepare briefing and presentation

Week 4, 2/17, Case 1 (completed). Presentation of briefings to members of the "National policy analysis group"
(Presentation=Asmt. 3; Guide = Asmt. 4)
Briefing titles

Peter Taylor, Glantzian approach 20 years on and the science-politics of localized responses to climate change
Felicia Sullivan, Fostering Self-Organization during Extreme Climatic Events
Mike Johns, Multi-modal predictability model for medical responses to extreme climatic events
Pam DiBona, Effective scientist-policymaker exchange: Three case studies
Sheyla Carew, The role of science in FEMA
Antonio Tempesta, Prevention versus crisis responses: The variety of roles of science
Danny García, When the market does not self-correct in response to environmental problems: Towards public awareness of economic ideas
Jeff Hamilton, Truth related to climate change

Use instructor-supplied password to see online copies of PBL reports

Preparation for class 5: Read Case 2, "The democratic control of science-A postscript 25 years after to Dickson's New Politics of Science," Mapping of one chapter of Dickson's New Politics of Science (Asmt 5; worksheet)

Week 5, 2/24, History of U.S. science policy/politics: Mapping of intersecting processes
Presentation of maps (Asmt 5) and discussion

Preparation for class 6: Ongoing inquiry into the case. Prepare to bring one example of a citizen-level science and politics initiative into week 6 discussion.

Week 6, 3/3, Rise and decline, hopes and outcomes of various citizen-level science and politics initiatives
Inormal presentations of examples of citizen-level science and politics initiatives, followed by discussion

Preparation for class 7: Prepare postscript contribution and presentation (Asmts. 7 & 6)

Week 7, 3/10, Case 2 (completed). Presentation of postscript contribution to Dickson (to be confirmed) and others
(Presentation=Asmt. 6; Postscript contribution = Asmt. 7)
Postscript contribution titles

(TBA)

Use instructor-supplied password to see online copies of PBL reports

Preparation for class 8: Read Case 3, "Research prospectus for collaboration with Europeans on comparative studies of policy related to uncertainty around new genetic technologies," Review Centro de Estudos Sociais (2005). Choose one case from this book, and search for a parallel site of research or policy formation in the United States as it relates to new genetic technologies.

Week 8, 3/24, Comparisons: within Europe; within the U.S.A.; between them

Preparation for class 9: Ongoing inquiry into the case. Prepare to bring one example of contrasting policies around science-based uncertainties into week 9 discussion.

Week 9, 3/31, Discussion of policy around science-based uncertainties

Preparation for class 10: Prepare research prospectus and presentation (Asmts 8 &9). Submit presentation for uploading by 10am on 4/7

Week 10, 4/7, Case 3 (completed). Presentation of research prospectus to panel of Europeans (by skype)
(Presentation=Asmt. 8; Research prospectus = Asmt. 9)
Research prospectus titles

(TBA)

Use instructor-supplied password to see online copies of PBL reports

Preparation for class 11: Read and start work on Case 4, "Professors seek ideas about teaching units or public engagement activities that prepare students and citizens to be informed participants in political debates about science, technology, and social change."
Preparation for class 11-13: Presenters prepare for in-class practice of "Education & civic engagement" units/activities. Other students prepare as requested by presenters in advance.

Week 11, 4/14, Practice "Education & civic engagement" units/activities

Preparation for extra session: Poster or other display of your PBL projects from this course (Asmt. 10)

Extra session, 4/16, 1-5pm, Changing Science, Changing Society Expo at UMB

Week 12, 4/21, Practice "Education & civic engagement" units/activities

Week 13, 4/28, Practice "Education & civic engagement" units/activities
Unit/activity titles

(TBA)

Preparation for class 14: Work with another student commenting on each other's draft "Education & civic engagement" report

Use instructor-supplied password to see online copies of Education & civic engagement units/activities

Week 14, 5/5, Taking stock of course: Where have we come & where do we go from here?
Review of initial worksheets on interests and goals for the course
Dialogue Process
CCT-style written evaluation
Formal evaluation
Closing circle

5/12 -- No class, but due date for final revisions of assignments and submission of participation items.

COURSE READINGS

to be developed (2/19 version)
Boal, I. (2009). "Climate, Globe, Capital: The Science and Politics of the Abyss." SUM, in press.

Centro de Estudos Sociais (2005) Identifying Trends in European Medical Space: Contribution of European Social and Human Sciences. Coimbra, Portugal: Centro de Estudos Sociais.

Clarke, A. (2005). Situational Analysis: Grounded Theory after the Postmodern Turn. Thousand Oaks, CA: Sage

Dickson, D. (1984). The New Politics of Science. New York, Pantheon, reprinted University of Chicago Press, 1988.

Hackett, E., O. Amsterdamska, et al., Eds. (2008). The Handbook of Science and Technology Studies. Cambridge, MA, MIT Press.

(See also 2005 syllabus and supplementary bibliography)