



MASSACHUSETTS COLLEGE OF LIBERAL ARTS

Massachusetts College of Liberal Arts
Division of Graduate and Continuing Education
413-662-5575

CHME 650 – Section 02, CRN 40190 (2 credits)
Natural Chemistry
Summer/Fall Course: Special Scheduling

Course Description:

This course is intended to provide the teachers attending the annual summer conference of NEACT (New England Association of Chemistry Teachers) with the opportunity to gain academic credit by attending various sessions of the conference and further investigating some of the topics. The theme of the conference is Natural Chemistry and those enrolled in the course will gain exposure to various concepts and practices related to natural substances as well as pedagogical workshops that would be useful for effective teaching in high school and middle school. **2 graduate credits.**

Prerequisite:

Bachelor's degree and Licensure to teach Chemistry/Physical Science/General Science at the high school or middle school level.

Instructors:

Dr. Meledath Govindan, Professor of Chemistry. Phone: 978-665-3628. E-mail:
mgovindan@fitchburgstate.edu

Text/Major Sources:

No specific textbooks are needed. A list of reading assignments and materials will be provided before the beginning of the course. This may include books, articles from chemical literature and/or Internet sources.

Cost:

\$500 per participant (2 graduate credits)

Class Schedule:

August 8: 1 pm – 5 pm; 7:30 – 9 pm

August 12: 9 am – 12 Noon and 1– 5 pm

August 13: 9 am – 12 Noon and 1– 5 pm; optional session 7:30 – 9 pm

August 14: 9 am – 12 Noon and 1– 3 pm

TBA in October, 2016: one day session of presentations 9 am – 3 pm.

Course Objectives:

Note: A set of specific objectives will be provided to the participants at the start of the conference when we have the final program set. The following presenters have confirmed as of April 18: Dr. Robert Harris, Dr. Steve Miller, Sue Klemmer, Dr. Sue Meschwitz-Salve, Dr. Cathy Neito, Dr. Stefan Gafner, Dr. Erin Rehrig, Dr. Marcy Balunas, Dr. Mathangi Krishnamurthy, Dr. Gonghu Li, Dr. Kate Anderson, Dr. Jayashree Ranga, Dr. Sourav Chakraborty, Dr. Rebecca Kinraide, Dr. Goudong Zhang, Jerusha Vogel, Esther Hines, Mary Christian- Madden, Steven and Kathy Siok, and Samantha Glaze Corcoran.

General objectives will include the following:

- Gain a general understanding of natural products chemistry and how chemicals in nature interact within the ecosystem.
- Gain exposure to experiments and demonstrations that could be incorporated into college, high school and middle school chemistry curriculum
- Workshops will feature new teaching techniques and experiments/ideas for incorporation of natural products chemistry, ocean chemistry, chemical ecology concepts, solar energy, green chemistry, and other new ideas into your lesson plans.

Course Expectations/Assignments

- All students will be required to attend all the scheduled sessions of the conference at MCLA on August 8-11, 2016. This will amount to approximately 22 hours.
- Attend a Saturday session in late September or early October (TBA) at either MCLA or Fitchburg State University (to be decided by a majority decision of those who are attending the class) to present their lesson plans and/or project proposals. Approximately 6 hours.
- Total meeting time will be approximately 28 hours.

Course Assignments

1. Written feedback on the presentations, lab activities and workshops at the attended conference sessions. A template for each session will be provided and these will be due at the final meeting on Thursday, 8/11. (In lieu of completing the forms, the student may submit a personal journal of reflections about each session and how it might be useful when applied in the classroom.)
2. A new lesson plan incorporating some aspect of the specific topics introduced at the conference. This can be a current lesson plan already being used but must involve concepts discussed at the conference. This written lesson plan must be of the quality necessary for publication in the NEACT journal.
3. Choose **one** the following:
 - a. Research Paper: Pick one of the topics presented, conduct further research on it and write a 10-page report comparing and contrasting it to other related topics currently taught in your class.
 - b. A written proposal (to the school district or a granting agency) for developing a course using a new technology, tool or methodology discussed, or acquiring a new equipment to support the chemistry education at your school. If this is a new course, it should include a syllabus, reading list, and other regularly required materials to have the course approved in your school. If this is a grant proposal sufficient information should be included for consideration of the grant application by a granting agency.

Grading:

- Attendance/participation in the NEACT conference sessions - 10%
- Written feedback of conference sessions – 30%
- Lesson Plan - 25%
- Research report or course proposal - 25%
- Oral presentation in the fall session- 10%

This is an MCLA graduate course and its grading policies for graduate courses will be applicable to this course. Neither NEACT nor its officers is responsible for the design or conduct of this course. Any dispute regarding grades or the conduct of the course should be dealt as per the policies and regulations described in the MCLA Catalog. Specifically, attention is drawn to the grading policies and other course policies. Attention is also drawn to the Academic Integrity Policy of the College and all provisions of that will be strictly enforced including those on plagiarism.

Withdrawal from Course:

Withdrawal from the course may be made prior to the 26th class hour for special scheduling courses without academic penalty – for this course this translates to **Tuesday, August 9 at 5 pm**. Withdrawals may be initiated by e-mailing the course instructor or the Registrar's Office at MCLA (registrar@mcla.edu). In either case, the instructor must receive a confirming copy of the completed course withdrawal form. Students who withdraw by simply not attending class will automatically receive a failing grade for the course.

Registration – Due: August 1, 2016

Registration for the Graduate Credit course is separate from the Summer Conference registration, which is also required. For summer conference registration visit: www.neact.org.

Please follow the directions below for on-line Graduate Course registration with MCLA.

1. Go to www.mcla.edu/summer and click the yellow 'Register Now' button at the top right corner.
2. Under 'Registration Instructions' at the top of that page, choose the Graduate Course Registration option.
3. Enter your name, address, contact & personal information to generate an MCLA ID number, which will begin with a capital A.
4. Use Course Registration Number (CRN) 40190 to register for this course, and follow prompts to the online payment screen.
5. Change the system's automatic suggestion of \$50 to \$500 to pay the full tuition for this course. This payment completes your registration.
6. Contact: Beth Leibinger, Program Assistant, Graduate and Continuing Education (413-662-5575) if there are difficulties.