MEMORANDUM

To:	ChE 496 Class	*From:*	Prof. Bob Barat
Date:	September 2, 2009	*Re:*	Introduction

Course Goals:

1. Challenge students to apply all prior classroom knowledge and laboratory experiences in the successful execution and analysis of chemical engineering experiments with procedures and devices applicable to mass transfer, separations, chemical reaction, and process control applications.
2. Inspire students to think critically as they approach the chemical engineering laboratory experiments with an ethical awareness and a research orientation.

Pre-requisite Courses:

ChE 349, 360, 380, 396, Chem 339, Math 225A

Co-requisite Courses:

ChE 460, 489

Class Meetings:

Wednesdays 8:30-11:30, Fridays 10:00 -1:00 -- Room B-7, Tiernan Hall
Attendance is Mandatory! If you need to miss class, let me know in advance. Make sure your group knows!
Always meet in basement lab first for announcements and any short lectures before proceeding to experiments.

Instructor Information:

Office Hours: Fridays 2-4 PM -- I'm around most days.
Location: 380 Tiernan Hall -- Individual or group appointments are OK.
Office Phone: (973) 596-5605 Fax: (973) 596-8436
Email (preferred contact mode): barat@njit.edu

Teaching Assistant:

Mr. Mohammad Azad (maa42@njit.edu)

Groups:

Determined 9/4/07 -- first lab assignment then given!
Target: groups of 3 – will allow one or two groups of 2 as needed – no group of 4!
Rotating group leader - Self-policing (PROFESSIONAL BEHAVIOR EXPECTED!)

Required Textbook:

Laboratory Manual for ChE 496 – Fall 2009
(see site: http://web.njit.edu~barat)

Handouts:

Supplements will be provided by instructor as needed
(see site: http://web.njit.edu~barat)

Course Requirements and Grading:

Five experiments will be assigned to each group. This is subject to change.
All reports and presentations are to be group efforts and submissions. Submitted reports should be on paper. Electronic submissions are allowed only in special cases and then only by prior arrangement with the instructor.

- Scholarly paper (1) – *Exp. #1* 20 %
- Proposal – Request for Funding – *Exp. #3* 20 %
- Industrial memo (2) – *Exp's. # 2, 4* 40 %
- Oral presentation (tech translation) – *Exp. #5* 20 %

IMPORTANT NOTE: Your behavior as a member of a group has an important impact on your final grade. Where group efforts are involved, we are now using an adjustment factor that acts as a multiplier on your grade based on the 5 reports. This multiplier is adapted from R.W. Brown, "Autorating: Getting individual marks from team marks and enhancing teamwork," paper 3C24, 1995 Frontiers in Education Conference Proceedings. This multiplier can raise or lower your overall grade. The factor is weighted by how you and your group colleagues grade your performance. **DO NOT TAKE THIS LIGHTLY!** (see site: http://web.njit.edu~barat)

ABET Course Goals:

1. Challenge students to apply all prior classroom knowledge and laboratory experiences in the successful execution and analysis of chemical engineering experiments with procedures and devices applicable to mass transfer, separations, chemical reaction, and process control applications.

2. Inspire students to think critically as they approach the chemical engineering laboratory experiments with an ethical awareness and a research orientation.

ABET Program Objectives Addressed:

1. **Engineering Practice:** Alumni from our program are successfully engaged in the practice of chemical engineering within industry, academe and government**,** working in a wide array of technical specialties including**,** but not limited to**,** process and plant design operations.