

The Alchemist

D E P A R T M E N T O F C H E M I S T R Y & L I F E S C I E N C E

POTION
MASTER
COL D.C.
ALLBEE

MASTER
SCRIBE
MAJ D.E.
TAYLOR

NEWSLETTER MAKES DEBUT

The Department of Chemistry & Life Science has started a semi-annual newsletter. The purpose of our newsletter is to inform alumni, former faculty & staff, and friends of the department what is occurring within the department. Our general format will include a message from the department head, significant activities, cadet honors & awards, faculty research, faculty update, and a general chemistry quiz.

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BREWINGS FROM THE POTION MASTER

I am excited as our newsletter makes its debut this year. The department has seen major changes in the recent years with more on the horizon. Our newsletter will allow us to share experiences with alumni, former faculty & staff, and friends; people who care about the department and its commitment to educating cadets. I would like to take this opportunity to talk about **Projects Day** which will take place on **May 3**. Projects Day is an opportunity for our cadets to showcase the work they have been doing. I encourage all of you to stop by and talk to these fine cadets. Please contact us (845) 938-3582 if you will be in the area and would like to participate in Projects Day. I hope you enjoy our newsletter and have a great summer. Sincerely, D.C. Allbee



CADETS SELECT MAJOR

The Class of 2009 selected majors in September, 64 cadets chose one of our three majors; Five cadets chose chemistry. 19 cadets chose chemical engineering. 40 cadets chose life science as their major. The total number of cadets enrolled in a departmental major is 164. We continue to attract the best and brightest of the Corps.

Our newest majors were recognized at a recent dinner in October. Our new cadets were welcomed by the Faculty & Staff, and our current students. Cadets in our programs continue to fare well not only in Corps leadership positions, but branch selection as well.



A Life Science major and a Chemical Engineer major make ice cream during a recent open house.

CADETS SELECTED FOR MEDICAL SCHOOL



15 students from the department were selected to attend medical school in the fall of 2007. Each year up to 2% of every graduating class are selected to attend medical school. A cadet will incur a 5 year obligation if attending a civilian medical school or a 7 year obligation if attending the Department of Defense medical school, the Uniformed Services University in Bethesda, Maryland. The following cadets were selected this year: Greer, Beasley, Faries, Shiozawa, Salomon, Snodgrass, Weyand, Nieves, Swann, Ni, Clark, Hostler, Yoon, Nestrta, and Coughlin.

AIADS

Fifteen cadets from the department participated in Academic Individual Advanced Development. AIADs provide cadets the opportunity to pursue advanced academic development during the summer months. Ten cadets spent three weeks at either Walter Reed Hospital or at Eisenhower Hospital gaining an appreciation of military medicine. One cadet interned at a chemical

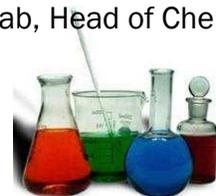
plant in Pennsylvania, another at Aberdeen Proving Grounds, one cadet at LLNL, one cadet at MIT, and one cadet even interned at a pharmaceutical company in Germany. AIADs are based on available partnerships, funding, as well as the cadet's abilities and desires.

CHEMICAL ENGINEERING DESK



Dr. Biaglow and LTC(P) Lachance make repairs to the distillation column.

The Chemical Engineering Program has seen growth every year since its inception in 2002. We graduated our first class in 2005. We continue to attract students who want a challenge and desire to apply their knowledge. Members of the Chemical Engineering advisory board for ABET accreditation met with department chemical engineering personnel. Those on the board and attending included COL(Ret) Dwight Springer, Former Department of Chemistry Deputy Head; Dr. Michael Loewenberg, Professor of Chemical Engineering at Yale; Dr E. Bruce Nauman, Professor of Chemical Engineering at Renssalaer Polytechnic Institute; Donald Glaser, Simulations Solutions Inc.; COL Peter Mueller, Commander Baltimore District, US Army Corps of Engineers; and Majid I. Abdul-Wahab, Head of Chemical Engineering, University of Bagdad.



CHEMISTRY DESK

Dr. Rick Hoff was recently invited to co-author a review article for a special issue of the Journal of Labeled Compounds and Radiopharmaceuticals, to be called "Isotope Effects: Recent Developments." This special issue is planned for 2007 on the occasion of the 50th anniversary of the journal. Dr. Hoff has been invited to co-author a chapter on stable isotope tracer studies in ester hydrolysis

LTC Joe Sloop was asked to participate as the Co-Chair for Basic Army Research Review - Electronics, Sensing and Detection committee. LTC Sloop will represent the military side of the house, provide committee leadership, and produce the final evaluation report. The committee meets 7-8 June in Washington, D.C. **MAJ Neil Radicic** presented an invited talk at FACSS (National Meeting of the Society for Applied Spectroscopy) in Orlando, FL, titled "A comparison of neutral atom and ion behavior in the first vacuum stage of an ICP-MS."

LIFE SCIENCE DESK

Led by **Dr. Michael Labare**, the Department assisted the Annual Meeting of the New York State Veterinary Medical Society's annual meeting (held at the Thayer Hotel 27-29 Oct). Dr. Dwight Bowman conducted a fecal diagnostic laboratory workshop in the Department's microbiology lab. The workshop was attended by approximately 25 veterinarians. **COL Leon Robert** attended the 2007 DoD Tri-Service Entomology Meeting at Jacksonville Naval Air Station, Jacksonville, FL. The purpose of the triennial conference was to capture recent deployment experiences and identify research and development needs to better control insect-borne and rodent-borne diseases on the battlefield.

RENOVATIONS TO BARTLETT HALL SCHEDULED



Renovations to new Science Center are scheduled to begin in 2009. As soon as Jefferson Hall is finished the library will move into Jefferson Hall and renovations on the library will begin. A Center for Science created in what is now the library and will be shared between the Department of Chemistry & Life Science and the Department of Physics. The plans for the renovations began in 1990.

THE SPOTLIGHT

John Ingram was promoted to LTC 1 NOV 2006.
LTC Russell LaChance C/O '85 has been selected for promotion to COL. The department is excited to announce the selection of the following three individuals as Academy Professors: **COL Leon Robert**, **MAJ John Burpo** , **MAJ Melinda Kalainoff**.



The Department will be participating in **Projects Day on May 3**. If you are in the area and would like to participate we would love to have you. If you are interested please contact Dr. Dawn Riegner at 845-938-3328 or LTC(P) Lachance at 845-938-3582.



MAJ Jeff Sheehan and **LTC Bob Bowden** traveled to Manchester, VT with the cadet fly fishing club.

We want to know what you are doing now. You can update mailing information and activities on our website at:

<http://www.dean.usma.edu/departments/chem/>

Click on the Newsletter link.

FACULTY RESEARCH

MAJ Matthew Armstrong is researching axisymmetric baffles to increase the minimum residence time for sludge during remediation. **MAJ Matthew Deloia** is researching the function of the myosin VII SRC homology three (SH3) domain. **MAJ Melinda Kalainoff** and **Dr. Riegner** attended the 232nd National American Chemical Society meeting in San Francisco, CA. On Monday, 11 Sep, MAJ Kalainoff presented "Learning Equilibrium Chemistry Using a Systematic Approach" . **LTC Joe Sloop** was informed his manuscript entitled "Design, Synthesis and Properties of Conformationally Fixed Semiquinone Monoradical Species," has been accepted for publication in The Journal of Organic Chemistry.

Dr. Michael Labare, Professor of Microbiology, is researching the effects of elevated concentrations of carbon dioxide on deep-sea microbes.

CURRENT FACULTY & STAFF

Department Head

COL David C. Allbee

Deputy Head

COL Patricia A. Dooley

Professors

Dr. Michael P. Labare

Academy Professors

COL Leon Robert

LTC(P) Russell P. Lachance

LTC Joseph C. Shannon

Associate Professors

Dr. Andrew I. Biaglow

Dr. Dawn E Riegner

Dr. Gary Washington

LTC Joseph C. Sloop

Assistant Professors

LTC Robert A. Bowden

Mr. Bradley C. Dick

Dr. Richard H. Hoff

LTC John M. Ingram

MAJ Melinda Z. Kalainoff

Dr. Eileen Kowalski

MAJ Robert H. Lindsey Jr.

COL Jerry C. Meyer

MAJ William N. Radicic

Dr. Thomas Spudich

Instructors

MAJ Matthew J. Armstrong

MAJ Kimberly A. Bennett

MAJ Darrin W. Clinton

MAJ Richard L. Comitz

Instructors

MAJ Matthew A. DeLoia

MAJ Melissa R. Eslinger

MAJ Marc J. Franciszkowicz

MAJ Timothy M. Hill

MAJ Andrew J. Morgan

MAJ Chi K. Nguyen

MAJ Andrew J. Novitski

MAJ Jeffery A. Sheehan

MAJ Dale E. Taylor Jr.

MAJ Christopher Whelan

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Mrs. Deborah Butler

Mrs. Kristen Costain

Dr. Steve Hobaica

Administrative Office

Mr. James Jackson

Mr. Keith Lewis

Mrs. Sharon Moran

Mr. Lance Richardson

Mr. Michael Smith

Mr. Manuel Treus

NEW FACULTY & STAFF

The department welcomed nine new faculty in August at the annual hail which took place on the Supe's boat. The following personnel joined the faculty and staff this year::

MAJ Melissa Eslinger-Instructor

MAJ Chi Nguyen-Instructor

MAJ Andy Novitske-Instructor

MAJ Marc J. Franciszkowicz-Instructor

Dr. Tom Spudich-Assistant Professor

LTC Joe Shannon—Academy Professor

LTC John Ingram—Assistant Professor

MAJ Jefferey Sheehan-Instructor

MAJ Darren Clinton-Instructor

Mr. Lance Richardson

Mr. James Jackson—Lab tech



New Instructors at the March Back.

DEPARTMENT BIDS FARWELL

LTC Bradley Dick retired in September. Mr. Dick has accepted a position with the department and so he will continue to mentor cadets and faculty. The department will bid farewell to the following individuals this summer:

COL Jerry Meyer— Ft. Leonard Wood

MAJ Kim Bennett— ILE

MAJ Melinda Kalainoff—Ft. Hood, Texas

MAJ Dale Taylor—Ft. Belvoir

LTC Bob Bowden - Walter Reed Army Institute for Research

MAJ Hunter Lindsey—Ft. Belvoir

MAJ Neil Radicic- NGA

CHECK US OUT AT:

<http://www.dean.usma.edu/departments/Chem/Default.htm>



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Department of Chemistry and Life Science Mission

To develop in cadets: a firm foundation in physical science, investigative techniques, and problem solving skills essential to their understanding and awareness of the relationships between science and society. The department provides elective courses for majors and fields of study necessary for intellectual growth and development in the profession of arms, to include attendance at postgraduate service schools and civilian institutions. Additionally, the department contributes to cadet military, physical, intellectual, and ethical development through faculty mentorship. Finally, the department focus on the development of military and civilian faculty emphasizing academic excellence, scholarship, cadet development, service, and conducts research emphasizing DoD priorities.

GENERAL CHEMISTRY QUIZ

How much do you remember from those long hot hours spent in Bartlett Hall? Test your knowledge.

Answers can be found on our website.

Does adding table salt to your pot of water when preparing spaghetti have any affect on the boiling point?

If you have a one pound block of

ice and one pound of water, which one has the greater density?

Is ice melting an example of an exothermic process or and endothermic reaction?

What do you do with a dead bird?

A solution is considered acidic if it has a pH below _____.

