Course X News For November, 1997

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Faculty Distinctions

Prof. Bob Langer, will be honored at the 25th International Symposium on Controlled Release of Bioactive Materials to be held June 21st-26th, 1998 in Las Vegas, Nevada. At the June symposium, Prof. Langer and his co-authors will receive the 1997 CRS-3M Pharmaceutical Graduate Student Outstanding Research Award for their paper entitled "Porous Dry-Powder PLGA Microspheres Coated with Lung Surfactant for Systemic Insulin Delivery via the Lung". Congratulations Prof. Langer on this distinctive honor!

Prof. Paula T. Hammond's recent research with graduate student Sarah L. Clark and undergraduate Martha M. Montague was featured in the October 6th edition of Chemical & Engineering News. ("New Method Makes Patterned Polymer Films", pgs 34-35). The article documents Hammond's recent breakthroughs in developing specialized ultrathin multilayer polymer films. These films take on potentially useful electronic and optical qualities when treated by a new procedure that makes the molecules form ordered
patterns on selected areas of a surface. Congratulations to Prof. Hammond and her
students on this development!

**Prof. Jackie Y. Ying** was invited to deliver the 1997 Ernest W. Thiele Lecture at the
University of Notre Dame on September 30, 1997. This distinguished lectureship was
established in 1986 to honor Dr. Thiele who is one of the pioneers in our discipline. It is
intended to recognize outstanding research contributions by a younger member of the
chemical engineering profession. Previous lecturers from our department include **Prof.
Douglas Lauffenburger** (1986) and **Prof. Robert Brown** (1989). Prof. Ying spoke on
"Nanostructure Processing of Advanced Catalytic Materials" in this year's lecture. Please
join me in congratulating Prof. Ying on this prominent presentation!

The research of **Prof. Robert Cohen** and his former graduate student Dr. B.H. Sohn was
published in the January issue of the Chemistry of Materials, and was recently featured in
the article "Films with Tiny Particles Could Have Many Uses" which appeared in the
October 8th edition of Tech Talk. Among the fascinating possibilities that may result
from Prof. Cohen and Dr. Sohn's work, are heat-absorbing windows, and permanent
magnetic security watermarks for important documents. Congratulations to Prof. Cohen
and Dr. Sohn on this important recognition!

**Professor Janos Beer** was plenary lecturer at the 9th International Coal Science
Conference in Essen, Germany on September 10th. The title of his talk was "Coal
Science Impacts on Combustion Technology". Kudos to Prof. Beer for being selected for
this honor!

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**Grad Student Distinctions**

Congratulations to Michael S. Wong who recently won a Young Researcher Award at the
International Union of Materials Research Societies International Conference in Asia.
Michael was recognized for his research with **Prof. Jackie Y. Ying** on "Synthesis and
Catalytic Properties of Mesoporous Phosphated Zirconia" at the conference in Chiba,
Japan on September 16-18, 1997. Accolades to Michael on this prestigious award!

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**Editor's Clarification**

In the October edition of Course X News, an article appeared in the "Grad Student
Distinctions" section citing the recent receipt of a Whitaker Senior Bioengineering
Design Award by Prof. Robert Langer and his group for their exceptional design project, "Differential Effects of Growth Factors on Tissue Engineering of Cartilage". The awardees were incorrectly identified as graduate students. The correct names and designations for the awardees are: Torsten Blunk, Postdoctoral Researcher; Lisa Freed, Research Scientist; Alisha Sieminski '99, Undergraduate; and Gordana Vunjak-Novakovic, Research Scientist. Once again, congratulations to Prof. Langer and his group and apologies for any confusion that may have resulted from this error!

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Department Events

Invited Guest Seminar

**Novel Hydrodynamic Instabilities in Interfacial Liquid Films - The Beauty and the Beast**

*Sandra M. Troian*

*Department of Chemical Engineering*

*Princeton University*

**Date:** Friday November 7, 1997  **Time:** 3:00 P.M.  **Place:** 66-110

A reception will be held before the seminar at 2:45 P.M.

Please contact *Arline Benford* at x8-7031 or arline@mit.edu if you would like to meet with Prof. Troian during her visit.

Thank you.

Visiting Scientist Seminar

**Response Of Micro-Organisms to Fluid Motion in Bioprocessing**

*Professor Susan T.L. Harrison*

*Dept. of Chemical Engineering University of Cape Town*

*Visiting Scientist in MIT's Chemical Engineering Department*

**Date:** Wednesday November 12, 1997  **Time:** 4:00 to 6:00 P.M.  **Place:** 56-154

MIT Hospitality Suite at 1997 AIChE Meeting in LA

The Department's hospitality suite for this year's [AIChE meeting](#) will be: Monday, November 17, 1997 6:30 - 9:00 p.m.

The San Francisco Room
The Westin Bonaventure Hilton

*Los Angeles, CA*

Printed invitations can be picked up from *Arline Benford* (x8-7031 or arline@mit.edu) in Room 66-560. Please let her know how many you will need.
As in the past, you are welcome to as many invitations as you would like, to either mail out to colleagues or hand out at the meeting itself.

**Tales From the Mousepad**

Please remember to adjust your computer's clock for the end of Daylight Savings Time:

- **Mac**
  - Open the Date & Time control panel. You can get to the Control Panels from the Apple menu.
  - Make sure the Time Zone says "Boston is a city in the current time zone." *Don't ignore this,* especially if you use SAP. If the city is wrong, or not set:
    - click the *Set Time Zone*... button
    - select Boston
    - click the *OK* button.
  - Uncheck the *Daylight Savings Time* box, if it's checked. If it's unchecked, don't check it. Got that?
  - Set the Current time to the current time.
  - Close the Date & Time control panel.

- **Windows 3.1**
  - Open the Main program group.
  - Double-click on Control Panel.
  - Double-click on Date/Time.
  - Click on the hour and use the spin button to set it back.
  - Click the *OK* button.

- **Windows 9x or NT** Your clock has probably corrected itself. If not:
  - Press the *Start* button.
  - Slide up to Settings.
  - Pick Control Panel.
  - Double-click on Date/Time.
  - Click on the *Time Zone* tab.
  - Make sure the time zone is set to Eastern Time.
  - Check the *Automatically adjust clock to daylight saving changes* checkbox.
  - Select the *Date & Time* tab.
  - Adjust the date or time, as necessary.
  - Click the *OK* button.

If you have any problems or questions, please send E-Mail to Peter Maloof.
Course X-Tras

ChemE Students Shine In Shakespeare Ensemble Production

The Shakespeare Ensemble at MIT is presenting "The Tale of Fuente Ovejuna", an original English adaptation of the Spanish golden age play by Lope De Vega.

The play depicts the struggle of a feudal town under the rulership of a thoughtless and unethical leader. The Ensemble, under the direction of Theater Arts Prof. Brenda L. Cotto-Escalera, conveys these themes in their own words within a colorful festival as the townspeople begrudgingly welcome their ruler. A fiesta before and through the show will bring the audience into the play (and onto the stage!).

Two Course X students have major roles: Kevin Dahm (G) is playing Esteban, the mayor of Fuente Ovejuna, and Marketa Valterova ('00) is playing his daughter Laurencia. Another Course X student, Jenny James Matta ('98) is the producer of the show.

Performances: 7:30PM on November 13, 14, 15 and November 20, 21, and 22
Where: Little Kresge Theater.
Tickets: $7 General/$5 Sr. Citizens, MIT and Wellesley students
Group rates are available.
To order tickets: Call 253-2903 or e-mail ensemble-tickets@mit.edu.

Education Opportunities

Japan Internships

Each year, MIT students travel to Japan for internships that last from one summer to one year. There are still a few slots remaining for graduate students or graduating seniors to go in 1998. If you have Japanese language experience and want to work in Japan, we will send you there, all expenses paid. This could be the perfect opportunity for you! For more information, please contact Mark Eykholt at 258-8208 or meykholt@mit.edu.

Safety in the Academic Laboratory
A Free Workshop for Undergraduate and Graduate Students Sponsored by the Northeastern Section of the American Chemical Society

- Free one-day laboratory safety seminar
- Learn more about laboratory safety in one day than you have in your entire prior experience.
- Learn how to protect yourself from hazards you never knew existed.
- See safety in a whole new context while learning and reviewing the fundamentals.
- Each participant will receive a three-ring binder with more than 150 pages of material on safety, plus an 80-page booklet on 25 safety issues.
- And, incredibly -- it's going to be fun!

**Audience**

Undergraduate and Graduate Science Students Majors in Arts, Biology, Chemistry, Engineering, Physics, Medical Science, and Elementary and Secondary Education.

**Cost**

The workshop is free. To ensure a place (and handouts), pre-registration is suggested. Lunch can be purchased at any of the local restaurants.

**Presented By**

Dr. James A. Kaufman
President of The Laboratory Safety Workshop, Natick MA
and co-sponsored by UMASS Dartmouth

**When**

Saturday November 15, 1997, 8:00 AM - 4:30 PM
Registration and Refreshments at 8:00 AM

**Where**

University of Massachusetts Dartmouth Group II - Room 227
North Dartmouth, Massachusetts

Some of the topics that will be covered:

- Eye and face protection
- Accidents
- Legal aspects
- Emergency planning
- Handling and storage of chemicals
- Biological and animal hazards
- Disposal of chemicals
- Electrical safety
- Scope of the problem
- Planning a safety program

**For further information, contact:**

Dr. James A. Golen, Department of Chemistry and Biochemistry
Positions Available

Doctoral Research

Graduate Students

Several graduate student positions are now available with Prof. Michael W. Deem's group at UCLA. Deem's group is currently engaged in five main areas of research:

- structure and function of small biological molecules
- dynamics of two-dimensional chemical reactions in the presence of disorder
- structure determination of solid-state materials
- diffusion in disordered microporous materials
- improved simulation methodology for charged, fluid systems

Both simulation and analytical statistical mechanics are used to attack these problems. Biased Monte Carlo, in particular, is used to great advantage in determining equilibrium behaviors. Field theories are used to analyze the long-time dynamics of two-dimensional chemical reactions and to extend short-time computer simulations of transport.

All Ph.D. students at UCLA are supported with a stipend of $18,000/yr. and all tuition and fees are covered.

For more information:
Prof. Michael W. Deem
Chemical Engineering
University of California at Los Angeles
5531 Boelter Hall
Los Angeles, CA 90095-1592
Phone: (310) 267-0169
Fax: (310) 267-0174

Postdoctoral Research

Postdoctoral Associate

Prof. Alon McCormick of the Department of Chemical Engineering and Materials Science at the University of Minnesota/Twin Cities. Prof. McCormick is seeking an
associate to work on a project concerning theory, simulation and measurement of diffusion in zeolites as a function of synthesis conditions.

For further information contact:
Prof. Alon McCormick
Department of Chemical Engineering & Material Science
Institute of Technology
University of Minnesota/Twin Cities
151 Amundson Hall
421 Washington Avenue, S.E.
Minneapolis, MN 55455-0132
Phone: (612) 625-1313
Fax: (612) 626-7246

NSF-NATO Fellowships in Science and Engineering

On behalf of the North Atlantic Treaty Organization (NATO), the National Science Foundation (NSF) invites applications for 12 month postdoctoral fellowships from beginning scientists, mathematicians, and engineers. Approximately 30 fellowships will be offered for research abroad and up to 10 awards will be made to U.S. institutions that would like to invite a Visiting Scientist from Cooperation Partner Countries. Eligible fields of research are:

- Mathematics
- Engineering
- Computer and Information Science
- Geosciences
- The physical, biological, social, behavioral and economic sciences
- The history and philosophy of science
- Interdisciplinary areas comprised of two or more of these fields

Research in the teaching and learning of science, mathematics technology and engineering is also eligible for support. Application deadline is November 14, 1997. Awards will be announced March 1998.

Summary of Applicant Eligibility

To be eligible for an NSF-NATO Postdoctoral Fellowship individuals must:

1. Be U.S. citizens, nationals, or permanent residents as of November 14, 1997
2. Have been awarded a doctoral degree (Ph.D. or equivalent) on or after October 1, 1993 but normally no later than October 1, 1998
3. Desire to conduct scientific research at appropriate government and non-profit scientific institutions which are located in the NATO-member or Cooperation Partner Countries other than the United States
To be eligible for an NSF-NATO Visiting Scientist Fellowship, applications must be submitted by an eligible U.S. host institution.

Applicants must:

1. Identify a host sponsor (Principal Investigator)
2. Be citizens of a NATO Cooperation Partner Country
3. Have been awarded a doctoral degree (Ph.D. or equivalent) on or after October 1, 1993 but normally no later than October 1, 1998

How To Apply

With Internet access and a supported WWW browser, an applicant can submit an application electronically using the NSF FastLane Postdoctoral Research Fellowship process. (Applications submitted on behalf of visiting scientists do not have this capability.). Referees of applicants who use FastLane can submit a Reference Report Form using FastLane. Security is provided to ensure that both applications and references can be seen only by authorized persons. The NSF Postdoctoral Research Fellowship process is on the NSF FastLane Home Page.

Additional questions may be directed to Ms. Beverly Sherman at (703) 306-1145 x4615

Postdoctoral Fellowship

The Institute for Bioengineering and Bioscience at the Georgia Institute of Technology invites applications for a postdoctoral position to study the use of microfabricated microneedles to enhance transdermal delivery of drugs. In initial studies we have fabricated arrays of microneedles with microns dimensions, have demonstrated their ability to increase transdermal transport across cadaver skin by up to 10,000-fold and shown that microneedles are not painful when inserted into the skin.

As part of an interdisciplinary team, this postdoctoral fellowship will address using microneedle arrays to deliver small drugs and macromolecules across skin through in vitro, in vivo and clinical studies. Research will occur in the laboratories of Dr. Mark Prausnitz at Georgia Tech's Institute for Bioengineering and Bioscience, in collaboration with the Microelectronics Research Center and Emory University Medical School.

The candidate should have a doctoral degree in the pharmaceutical sciences, bioengineering, or a related field and experience with drug delivery research and animal studies. Experience with microfabrication technology is not required.

If interested, send curriculum vitae and names of three references to:
Prof. Mark R. Prausnitz
Institute for Bioengineering and Bioscience
School of Chemical Engineering
Georgia Institute of Technology
Academic

Assistant Professor

The Department of Chemical Engineering at University of Texas/Austin invites applications for a tenure-track faculty position at the Assistant Professor level. A Ph.D. is required and applicants must have at least one degree in Chemical Engineering, an outstanding record of research accomplishments and a strong interest in undergraduate and graduate teaching. Preference will be given to applicants with skills that will add to the Department's strengths in bioengineering, environmental science and engineering, interfacial phenomena and fluid mechanics materials processing and science, process analysis separation processes. The successful candidates are expected to teach undergraduate and graduate courses, develop a research program, collaborate with other faculty, and be involved in service to the university and the profession. Applications from women and minorities are encouraged. Interested persons should submit a detailed curriculum vitae including academic and professional experience, a list of peer reviewed publications and other technical papers, and the names, addresses and telephone numbers of three or more references to:

Chairman, Department of Chemical Engineering
The University of Texas at Austin
Austin, TX 78712-1062

Tenure-Track Faculty (2)

The Applied Science Department at the College of William and Mary invites applications for two tenure-track faculty members at either the assistant, associate, or full professor level to support activities in the Materials Processing Institute (MPI). The MPI has facilities on the William and Mary campus and in the Applied Research Center located at the nearby Thomas Jefferson National Accelerator Facility. In addition to maintaining a vigorous program of classroom instruction and experimental research at both the undergraduate and the graduate level, both faculty members will support the department's involvement in a program of industrial and applied research using the Free-Electron Laser at the Jefferson Lab. Both faculty will also work to enhance the research activities of the Computational Science Cluster by fostering computational simulations to complement materials processing experiments.

Successful candidates will have a Ph.D. in science or engineering and will have demonstrated successful conduct of research in the use of lasers or intense incoherent optical methods for materials processing. At the junior level, preference will be given to candidates with demonstrated interest in computational modeling. Experience with photo-assisted deposition or patterning, including laser ablation, PACVD, or RTA, or in laser
methods for nanofabrication of MEMS, electro-optical components, or other micro-
machining applications, is highly desirable. Candidates should also have a demonstrated
interest in other forms of energetic, directional processing of materials. Candidates
seeking senior faculty status (Assoc. Prof., Full Prof.) must also show an established
successful research program, excellence in teaching, and evidence of National or
International prominence in this field. Candidates should submit a complete C.V. and
copies of no more than 10 refereed publications in the above areas. Candidates should
also have at least three letters of recommendation sent on their behalf.

Submit all materials to:
Chair, Search Committee MPI, Applied Science Department
College of William and Mary
Williamsburg, VA, 23187-8795

Review will begin January 15, 1998 and continue until the position is filled.

Assistant Professor

Vanderbilt University, Department of Chemical Engineering invites applications for two
tenure track openings at the Assistant Professor level for Fall, 1998. A Ph.D. with a
distinguished academic record is required. Responsibilities include teaching
undergraduate and graduate courses and establishing an externally funded, scholarly
research program. The research area is open but the department is especially interested in
candidates who can contribute fundamentally and broadly to focus areas on materials and
the environment.

Vanderbilt is currently ranked nineteenth among national universities by U.S. News. The
campus is located one and one-half miles from downtown Nashville in a park-like setting.
The University has 10 schools which provide a full range of undergraduate, graduate and
professional programs. The School of Engineering is divided into 6 departments and has
96 faculty members and approximately 1200 undergraduate and 300 graduate students.

Interested persons should send their curriculum vitae, a statement of research interests,
and names and addresses of three or more references to:
M. Douglas LeVan, Chair
Department of Chemical Engineering
Vanderbilt University
Box 1604
Station B
Nashville, TN 37235

Assistant Professor

Applications are invited for an expansion tenure-track assistant professor in chemistry for
fall 1998. Applicants must have a Ph.D. in chemistry and a strong commitment to
teaching. Teaching responsibilities include analytical chemistry, instrumental analysis,
and general chemistry. Preference will be given to candidates with research interests in experimental analytical chemistry, surface science, or another field complementing current faculty research. The successful candidate will be expected establish a funded research program involving undergraduates.

Penn State-Behrend is a four-year and graduate college in the 22 campus Penn State System. It is committed to providing high quality programs that serve the needs of northwestern Pennsylvania. The Division of Science has forty full-time faculty in biology, chemistry computer science, geoscience, mathematics, and physics. It offers baccalaureate programs, including a chemistry major and minor.

Erie is an attractive, renascent city of about 270,000 located on the Pennsylvania shore of Lake Erie, approximately two hours drive from Pittsburgh, Cleveland, and Buffalo. There are abundant cultural and recreational opportunities, and housing costs are quite reasonable. Penn State-Behrend has an especially beautiful 700-acre campus.

Application deadline is November 17, 1997. Send a detailed resume transcripts, teaching and research statements and arrange that three references send letters to:
Dr. Roger F. Knacke
Division of Science
Department CHEM-AS
The Pennsylvania State University at Erie
Station Road
Erie, PA 16563-0203
Phone: (814) 898-6105
Fax: (814) 898-6213

Assistant Professor

Carleton College will have a tenure-track position at the Assistant Professor level beginning September 1998. We seek a person with a strong commitment to undergraduate teaching who will maintain an active research program; start-up funding will be available. Although candidates with experience in different subfields of chemistry are encouraged to apply, the highest priority will be to find a person who will develop course work and a research program in either materials science, environmental chemistry, or analytical chemistry. In addition to teaching courses in general chemistry and at the advanced level, it is desirable if the candidate can share the teaching of sophomore-level analytical chemistry. Carleton, a residential undergraduate college of 1800 students located 35 miles south of Minneapolis and St. Paul, is recognized for its quality teaching and commitment to student/faculty research. The Chemistry Department has 8 faculty, about 25 majors per year, and modern facilities and equipment. Applications should include a curriculum vitae, graduate and undergraduate transcripts, a two-page statement of teaching philosophy, a document outlining research interests, and three letters of reference. Completed applications should be received by December 10th.
Tenure-Track Faculty

The University of Pennsylvania is soliciting applications for a tenure track faculty position in Chemical Engineering. The University seeks an individual with exceptional promise for, or proven record of, research achievement who will excel in the teaching of undergraduate and graduate courses. Applicants must have a Ph.D. in Engineering or equivalent. Interested persons should send a curriculum vitae, including names of at least three references to:

Dr. Raymond J. Gorte
Department of Chemical Engineering
Towne Building
University of Pennsylvania
220 S. 33rd Street
Philadelphia, PA 19104-6393
Phone: (215) 898-8351
Fax (215) 573-2093

Faculty

The Department of Chemical Engineering at the University of Illinois Urbana-Champaign invites applications from qualified candidates for one or more full-time regular faculty positions (rank open). A preferred starting date for these positions is August, 1998. In order to ensure full consideration, applications must be received by January 1, 1998.

Applications will be accepted after January 1, 1998 until the position is filled.

Interviews may be conducted during the application period, but all applications received by January 1st will receive full consideration: salary and appointment level are open and will depend upon qualifications. A Ph.D. with a distinguished academic record is required. Duties include teaching undergraduate and graduate courses, and direction of M.S. and Ph.D. theses. The candidate is expected to develop a strong imaginative research program and to engage in outstanding scholarly activities leading to national recognition. Past accomplishments should support these expectations. Applications with curriculum vitae and names of three references should be sent to:

Prof. Charles F. Zukoski, Head of Chemical Engineering
University of Illinois
Assistant Professor

Bucknell University invites applications for a tenure-track position at the entry level assistant professor rank in the Department of Chemical Engineering beginning fall 1998.

A doctorate in chemical engineering and high potential for excellence in teaching are required, undergraduate degree from an ABET accredited (or equivalent) program preferred, industrial experience desirable.

The successful candidate will have the ability to teach courses across the chemical engineering curriculum including process control. Expertise in particle technology or related areas also desirable. Opportunities exist to teach and direct research at the master's level.

Applications will be reviewed beginning November 1 and will continue to be accepted until the position is filled.

Send curriculum vitae, a statement of teaching interests, a research plan, and names of three references to:
Dr. Michael Prince
Search Committee Chair
Department of Chemical Engineering Bucknell University
Lewisburg, PA 17837
Phone: (717) 524-1114
Fax: (717) 524-1822

Assistant Professor

The Department of Chemical Engineering at the University of Notre Dame invites applications from qualified individuals for the position of tenure-track Asst. Professor. A doctoral degree in chemical Engineering or a related discipline is required and applicants should possess a strong commitment to teaching and demonstrate potential for development of an exceptional research program. The areas of bioengineering or materials are of particular interest, but outstanding candidates in other areas will be given full consideration.

Applicants should send their curriculum vitae, statement of teaching and research interests and the names of at least three references to:
Assistant/Associate Professor

Department of Mechanical Engineering
Purdue School of Engineering and Technology
Indiana Univ./Purdue Univ. at Indianapolis
Area of Excellence: Biomaterials and/or biomechanics

Qualifications: Ph.D. in an engineering discipline and research expertise in biomedical engineering, preferably in the areas of polymeric biomaterials, musculoskeletal or cardiovascular biomechanics biofluids, tissue engineering, or cellular biomechanics

Expectations:

1. Teach courses in biomaterials and/or biomechanics for the new Purdue Biomedical Engineering Program.
2. Establish a state-of-the-art research program in collaboration with the Indiana University School of Medicine

Start Date: August 1, 1998

Deadline for Applications: December 31, 1997, however applications will be accepted until the position is filled.

Interested?: Send a curriculum vitae along with statement of professional accomplishments and goals, and a list of at least three references to:

Dr. Charles H. Turner
Chair of the Search and Screen Committee
Mechanical Engineering Department
723 W. Michigan Street
Indianapolis, IN 46202-5132

For additional information contact:
Phyllis Koch
Phone: (317) 274-9717

Department Chair/Professor
University of Virginia seeks outstanding candidates for the position of professor and chair of the Department of Chemical Engineering.

The Department of Chemical Engineering currently has ten faculty members, approximately fifty undergraduate students in each year and sixty graduate students, two-thirds of whom are doctoral students. The department currently occupies a modern (1992) laboratory and office building as well as space in Thornton Hall, the main engineering building. Research activities in the Department currently are concentrated in reaction and electrochemical engineering catalysis, separations science and technology, biochemical engineering, bioremediation and environmentally benign processing, and molecular simulation. The School of Engineering and Applied Science is composed of nine departments with 1800 undergraduate students and about 650 graduate students. The University of Virginia, founded by Thomas Jefferson, is consistently ranked as one of the finest public universities in the United States.

Interested parties should submit a curriculum vitae, and the names of three references to: J.L. Hudson, Chair
Department of Chemical Engineering
Thornton Hall
University of Virginia
Charlottesville, VA 22903
Phone: (804) 924-7778
Fax: (804) 982-2658

Junior Position

The Chemical Engineering Department at the University of Florida invites applications or nominations for tenure-track faculty positions at the assistant and/or associate professor levels available for Fall term 1998. Candidates must have Ph.D. in Chemical Engineering or related area. Responsibilities include developing and conducting sponsored and unsponsored research, teaching at the graduate and undergraduate levels, supervising the educational and research programs of graduate students, and participating in departmental, college, and University affairs. Starting salary is negotiable. We are primarily seeking candidates with expertise in bioengineering.

Eckis Chair

The Chemical Engineering Department at the University of Florida invites applications or nominations for candidates at the Associate or Full Professor level for the Eckis Professorship of Biomedical Engineering. The Eckis Professor will be jointly appointed to the Dept. of Chemical Engineering and the Biomedical Engineering Program. Candidates must have Ph.D. in Chemical Engineering, Biomedical Engineering or related area. Responsibilities include developing and conducting sponsored and unsponsored research, teaching at the graduate and undergraduate levels, supervising the educational and research programs of graduate students, and participating in departmental, college and University affairs. Starting salary is negotiable.
To apply for either of these positions, please send curriculum vitae, detailed research and teaching interests, a list of at least three references, and a selection of reprints and preprints to:

Chairman, Faculty Search Committee
Department of Chemical Engineering
University of Florida
PO Box 116005
Gainesville, FL 32611-6005
Phone: (352) 392-0881
Fax: (352) 392-9513

The application deadline is January 16, 1998.

Assistant Professors (2)

The Department of Chemistry at Washington University in St. Louis invites applications for two tenure-track faculty positions at the Assistant Professor level to begin in September 1998. One position is in the area of materials chemistry. The second position is in the area of experimental physical chemistry. Participation in the teaching of core chemistry courses at both the undergraduate and graduate levels will be required. Applications should be received by October 31, 1997, and consist of a curriculum vitae and a concise, specific statement of research plans. Candidates should arrange for three letters of reference to be sent by the same date. Address all materials to:

Faculty Search Committee
Department of Chemistry
Campus Box 1134
Washington University
One Brookings Drive
St. Louis, MO 63130-4899
Phone: (314) 935-6530
Fax: (314) 935-4481

Tenure-Track Faculty

The Department of Chemical Engineering at the University of South Carolina invites applications for one tenure-track position available beginning Fall 1998. Salary will be commensurate with qualifications and experience. The Department seeks individuals who possess an outstanding academic record, have demonstrated commitment to excellence in undergraduate and graduate education, and are capable of establishing a strong research program. Applicants must possess a Ph.D. in Chemical Engineering. Send a letter of application, resume, statement of research plans and teaching interests, a set of representative publications as well as names and contact details of three references to:

Ralph E. White
Chairman, Department of Chemical Engineering
University of South Carolina
Review of applications will continue until the position is filled.

**Junior Faculty**

The Department of Chemical Engineering at Stanford University is pleased to announce a tenure-track faculty position at the Assistant or untenured Associate Professor level focussing on the chemistry and reactivity of materials and material surfaces. We hope to fill the position by June 1, 1998. Areas of interest include, but are not limited to, chemical reactive processes at semiconductor surfaces, including the chemistries and kinetic sequences associated with etching (wet or dry), deposition, and cleaning processes. The future hire is expected to develop a world class graduate research program with an emphasis on the fundamental physical, chemical, and engineering aspects of reactivity and reactive surfaces. The faculty member will benefit from and contribute to the interactions among faculty in Chemical Engineering but also Electrical Engineering, Materials Science, Physics and Chemistry as well. Applicants should be seeking a stimulating interdisciplinary environment in which to pursue teaching and research. Responsibilities include undergraduate and graduate teaching. A Ph.D. or equivalent is required. Applicants should send a resume including research and teaching interests and accomplishments, publications and the names (with full address, phone number, and email address whenever possible) of five references to:

**Professor Eric S.G. Shaqfeh**
Chair, Faculty Search Committee
**Department of Chemical Engineering**
**Stanford University**
Stanford, CA 94305-5025
Phone: (650) 723-3764
Fax: (650) 723-9780

Applications must be received by Jan. 1, 1998.

For more information on opportunities listed above, complete advertisements are maintained in the job openings book in the Student Office, 66-366.

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**The Final Word**

From the back page of *New Scientist*, comes this observation:
"Periodically the Mir space station is supplied by computer-controlled modules, which inch towards it at no more than 0.36 metres per second to avoid damage. Earlier this year, a module inexplicably slammed into the space station at high speed. The result? The impact released a solar panel that had been jammed for a year. It just goes to prove the universal nature of the engineer's last resort: if at first it doesn't work, bang it till it does."

Thanks To...

Prof. Armstrong, Elaine Aufiero, Prof. Beer, Arline Benford, Rebecca Carrier, Kevin Dahm, Mark Eykholt, Bhengy Jackson, Prof. Langer, Peter Maloof, Ilda Moura, Carol Phillips, Ray Umashankar, and Prof. Ying for their contributions to this month's Course X News!

Submissions for the Course X News should be sent to Greg Sands, gsands@mit.edu.