NSF CHAUTAUQUA 2005
THREE-DAY SHORT COURSES
FOR COLLEGE TEACHERS

Center for Excellence and Innovation in Education,
Stony Brook University, Stony Brook, Long Island, New York

Stony Brook University is offering fifteen Chautauqua Courses for College Teachers next spring. These courses are partially supported by NSF and there is no tuition fee. There is an application fee of $60.00 per course (full refund up to 30 days before course). Because we expect the courses to fill quickly, we are notifying you in advance of the publication and mailing of the national brochure.

Two courses will be held at the Stony Brook University campus on the north shore of Long Island, eight will be held at Stony Brook Manhattan, New York, New York, one one at James Madison University, Harrisonburg, VA; one in Washington, D.C., and special extended programs in Costa Rica and Beijing, China. Contact Programs Administrator, Edith Padilla, epadilla@notes.cc.sunysb.edu.

Sincerely,

Lester Padly, Director
Chautauqua Program
E-mail: Lpadly@notes.cc.sunysb.edu

Eli Seifman, Director Emeritus
Center for Excellence and Innovation in Education
E-mail: Eseifman@notes.cc.sunysb.edu

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GENIUS
RALPH DAVIS, Albion College
PHILLIP SCHEWE, American Institute of Physics

May 19-21, 2005 Stony Brook Manhattan, NYC
Apply: SUSB

This course is an examination of the concept of genius as it has been applied to prominent men and women in the history of science. It was defined by Samuel Johnson as "... a mind of large general powers, accidentally determined to some particular direction." His definition is succinct and simple. However, the actual use (and abuse) of the term is anything but simple. Various writers have explored this concept from Francis Galton and William James to Alfred Bener, Lewis Terman, Hans Eysenck and D.K. Simonon. Whether the basis of genius is seen as eminence and achieved distinction, intelligence, IQ, or creative capacity, certain questions seem to persist: Is it a "mystic gift," an emergent trait, or the result of hard work, persistence and modest talent? Is there any clear meaning to the concept at all? Can it be usefully applied to the history of science? Does the concept have explanatory power? Is it even helpful? Are certain social and cultural conditions necessary for the appearance of genius? Might the whole notion of genius simply be a myth, as Robert Wesberg claims, with the "genius" having neither methods nor capacities different from the rest of us? Is it merely a manifestation of the "cult of personality"? Is the paradigm/normative science distinction helpful here? Is there a consistent psychological or personality profile for genius - high intelligence, persistence, ego-strength, psychotics, overinclusiveness, etc.? Is there a strong genetic component? What can evolutionary psychology tell us? What is the relationship of gender to the usage of the term 'genius'?

These issues, and others will be explored using case studies persons who have made outstanding scientific and intellectual contributions such as A.Hazen, Ludwig Boltzmann, Marie Curie, Charles Darwin, Leonardo da Vinci, Albert Einstein, Richard Feynman, Sigmund Freud, Galileo Galilei, Sofia Kovalevskaya, Rita Levi-Montalcini, Barbara McClintock, Lise Meitner, Isaac Newton, Henri Poincare, Ramanujan, Chien-Shiung Wu, etc. Through an examination of biographical material and specific accomplishments, we hope to promote discussions that will broaden and enrich our thinking about genius and hopefully will increase our understanding so that both we and our students can better appreciate and evaluate the work of exceptional individuals.

For college teachers of: all disciplines
Prerequisites: None.

PHILLIP F. SCHEWE is chief science writer at the American Institute of Physics, the largest publisher of physics journals in the world. He has a PhD in particle physics and writes a popular newsletter called Physics News Update and is a contributing editor at Physics Today magazine. He is also a playwright and is presently at work on a popular book about the electrical grid to be published by the National Academy Press.

RALPH DAVIS has been a facilitator for a number of Chautauquas including The Creative Process in Science & Art, The Limits of Science, and Paradox. He edited Leadership and Institutional Renewal and is Distinguished Honors Professor at Albion College where he has directed the Basic Ideas interdisciplinary program and the Honors Program and chaired the Department of Philosophy.

SOCIAL MOVEMENTS AND GLOBALIZATION
JACKIE SMITH, Stony Brook University

June 2-4, 2005 Stony Brook Manhattan, NYC
Apply: SUSB

Global economic and political integration have important consequences for the practice of democracy in contemporary societies. These processes have also inspired popular mobilizations to both resist predominant models of market-dominated globalization and to generate support for alternative forms of globalization. This course reviews the recent and rapidly expanding literature on how global integration affects political participation and democracy, including the rise of new forms of transnational political action. The course will provide an overview of key literatures on globalization and social movements at it explores the interactive relationships between global institutions, national politics, and citizens' mobilizations. We will consider, for instance, how social movement actors interact with the United Nations and national financial institutions (World Bank, IMF, World Trade Organization). We also consider the research on their role in shaping global policies and other forms of social change. An important question addressed here is how the globalization of politics - i.e., the transfer of some elements of political decision making from local/national to transitional institutions - affects the practice of democracy. The short-course will present ideas for bringing global themes into courses that focus on local or national-level politics and society, and it is relevant for those teaching courses on social movements, political participation, and international relations, among other areas.

For college teachers of: all disciplines, but especially social sciences.
Prerequisites: None.

DR. SMITH is Associate Professor of Sociology at SUNY Stony Brook. She is currently completing work on a book on globalization and social movements. She has co-edited three books on transnational social movements, the most recent being Coalitions Across Borders: Transnational Protest and the Neoliberal Order (2005, Rowman & Littlefield). Her research on global protests over trade and social justice issues has appeared in Mobilization: an International Journal, Social Forces, International Sociology, and Dissent. She teaches courses on global sociology, environmental sociology, social movements, and the United Nations.

AMERICA'S HIDDEN PRESENCE: SOCIOECONOMIC CLASS
MICHAEL ZWEIG, Stony Brook University

June 2-4, 2005 Stony Brook Manhattan, NYC
Apply: SUSB

The point of this course is to bring class back into focus in the United States, especially the working class. It is an interdisciplinary presentation based in the social sciences, meant as a resource for those interested in the world of work, power, and politics at the start of the new millennium.

We will approach class more as a question of power than income or life style, looking at class - the capitalist class, the middle class, and the working class - in terms of the relationships among them in the social power grid. We will explore interactions that operate among class, race, and gender, and the meaning of class within globalization. Using the latest data, we will see why class is important by showing how our understanding of major social issues changes when we look at them through the lens of class.

The course will include exercises in the pedagogy of class to explore techniques and materials useful for teaching about class in college, university courses, and in adult education courses.

For college teachers of: all disciplines.
Prerequisites: None.

DR. ZWEIG is the founder and director of the Center for Study of Working Class Life and professor of economics at Stony Brook University, where he has won the SUNY Chancellor's Award for Excellence in Teaching. His most recent book is titled What's Class Got To Do With It? American Society in the Twenty-First Century, (Cornell, 2004). His earlier books include The Working Class Majority: America's Best Kept Secret (Cornell, 2000, Religion and Economic Justice and The Idea of a World University. He has served two terms on the state executive board of United University Professionals, Local 2190, American Federation of Teachers, the union representing nearly 27,000 faculty and professional staff throughout the SUNY system.
THE POGIL CLASSROOM: ENGAGING STUDENTS AND DEVELOPING LEARNING SKILLS
DAVID HANSON and TROY WOLFSKILL, Stony Brook University

June 6-8, 2005 Stony Brook University
Apply: SUSB

POGIL (Process-Oriented Guided-Inquiry Learning) is a student-centered method of instruction that is based on recent developments in cognitive learning theory and results from classroom research that suggest most students experience improved learning when they are actively engaged, working together, and given the opportunity to construct their own understanding. POGIL emphasizes that learning is an interactive process of thinking carefully, discussing ideas, refining understanding, practicing skills, reflecting on progress, and assessing performance. In a POGIL classroom or laboratory, students work on specially designed guided-inquiry materials in small self-managed groups. The instructor serves as a facilitator of learning rather than as a source of information. The objective is to develop learning skills as well as mastery of discipline-specific content simultaneously.

This Chautauqua course models the POGIL classroom appropriate for introductory science courses in disciplines such as chemistry, biology, mathematics, and physics. The philosophy and principles of process-oriented guided-inquiry learning are discussed. Text-based and computer-based materials that support this learning environment are examined. Teaching strategies that help make it successful are demonstrated. Activities suitable for use in participants’ courses are designed, and plans for implementing POGIL, either to replace or supplement lectures, are developed and shared.

In the POGIL classroom, students work in teams to acquire information and develop understanding through guided inquiry. They accomplish tasks and examine models or examples, which provide all the information central to the lesson, in response to critical-thinking questions. These questions compel the students to process the information, to verbalize and share their perceptions and understanding with each other, and to make inferences and conclusions, i.e. construct knowledge. They then apply this knowledge in simple exercises and to problems, which require higher-order thinking involving analysis, synthesis, transference, expert methodologies, and integration with previously learned concepts. The teams report their results to the class, assess how well they have done and how they can do better, develop strategies for improving their skills, reflect on what they have learned, and submit a written report. In this environment, key process skills in the areas of information processing, critical thinking, problem solving, teamwork, communication, self-management, and self-assessment are nurtured. These skills, just like skills in laboratory work and athletics, can be strengthened through practice, and including them explicitly in courses not only helps students be successful but also prepares them for the workplace and for life in general.

The POGIL format is being developed and disseminated through grants from the National Science Foundation and has been described in several publications: J.N. Spencer, J. Chem. Ed. 76, 566-569 (1999); J.F. Farrell, B.S. Moog, and J.N. Spencer, J. Chem. Ed. 76, 570-574 (1999); D. Hanson and T. Wolfskill, J. Chem. Ed. 77, 120-130 (2000) and 78, 1417-1424 (2001).

Note: Participant expenses up to $200 for board and room will be paid by the NSF-supported POGIL project. The NSF grant does not allow payment of other travel expenses, i.e. transportation. Details will be sent upon receipt of the course application. For information about the POGIL project, go to www.pogil.org.

For college teachers of: science and mathematics.
Prerequisites: None.

DR. HANSON is a Professor of Chemistry at Stony Brook University. He is an established research scientist with over 125 publications, has served as Chair of the Department and Chair of Stony Brook’s Learning Communities Program. He graduated from Dartmouth College and received a Ph.D. from the California Institute of Technology.

DR. WOLFSKILL is a Lecturer and Education Specialist in the Department of Chemistry at Stony Brook. He has taught at both the college and university levels, conducted workshops for undergraduate and graduate teaching assistants and faculty nationwide, developed process-oriented guided-inquiry activities, and currently is developing a computer-based learning system, LUCID (Learning and Understanding through Computer-based Interactive Discovery). He graduated from Albright College and received a Ph.D. from the University of Virginia.

CHINA'S PERSPECTIVE ON NATIONAL SECURITY ISSUES
SU HAO, Foreign Affairs University, Beijing, People's Republic of China
June 6-10, 2005 Beijing, People's Republic of China
Apply: SUSB

This course has a participant fee of $195.00 (in addition to the application fee) to cover administrative and other course-related expenses. Other estimated costs are as follows: five nights lodging, $150.00, meals and receptions, $100.00, optional cultural events and sightseeing, $125.00. Visa fee, $50.00. Tourist class air fare to Beijing is approximately $1,000.00 with discounts available on the web.

This unique, five-day short course in Beijing will provide an opportunity to engage in direct discussions with Chinese diplomats, scholars, military, and ministerial officials on their home ground. It will provide a Chinese perspective on emerging security issues of mutual interest to China, other Asian nations, and the United States. It is sponsored by the East Asian Studies Center of China Foreign Affairs University, located in Beijing, a branch of China’s Ministry of Foreign Affairs responsible for the education of Chinese diplomats and others preparing for international careers. New topics will include:

- Counterterrorism and Multilateral Cooperation in the Asia-Pacific Region
- Marine Security and the Safety of Sea Lanes
- Epidemic Disease and Security in the Asia-Pacific
- Transnational Crime and International Cooperation

The five-day course will be held at the attractive Beijing campus of the Foreign Affairs College. Participants can reside in inexpensive housing in a modern campus residence for visiting foreign scholars. Presenters will be drawn from university departments and various civilian and military ministries. Participants have ample opportunity for participants to engage in discussions with presenters. Applicants will receive information and advice on visa applications and other necessary travel arrangements. It is not difficult to travel to Beijing. Participants wishing to arrive early or stay later at the Foreign Affairs College in order to extend their visit to China may do so at very modest cost by making individual arrangements with the university.

For college teachers of: political science, history, international affairs, social and natural sciences.
Prerequisites: None.

DR. SU is deputy director of East Asian Studies Center at the Foreign Affairs University in Beijing, a member of the China Committee of the Council of Security Cooperation in the Asia-Pacific Region, board member of the Chinese Association of Arms Control and Disarmament. He has a broad background in China’s foreign policy, strategic and security studies, and arms control and disarmament affairs. He will coordinate presentations by his colleagues and other officials.
JUST IN-TIME TEACHING: BLENDING ACTIVE LEARNING WITH WEB TECHNOLOGY
GREGOR NOVAK, EVELYN T. PATTERSON, United States Air Force Academy
JAMES BENEDICT, James Madison University
KATHLEEN MARRS, Indiana University Purdue University
June 9-11, 2005 James Madison University, Harrisonburg, VA
Apply: SUSB

Just-in-Time Teaching (JITT) is a pedagogical strategy developed over the past six years. JITT is presently used in over 100 science and humanities courses at 100+ institutions. The JITT approach blends cutting edge active learning classroom methods with state-of-the-art electronic communication technologies. In preparation for an interactive classroom experience students work with strategically constructed web-based assignments with due dates just before class time. Instructors base the daily classroom activities on the student submissions. The preparatory work creates a need-to-know atmosphere and gives students a sense of ownership of the learning process.

The JITT community has been awarded substantial funding from NSF for a three year project to develop a digital library of JITT resources. For more on JITTDL please visit http://jittdl.org.

The workshop will be a hands-on event with participants actively engaged in the pedagogy discussions and the authoring activities. Working from templates provided by the workshop presenters, the participants are expected to leave the workshop with a start-up portfolio of resources, enabling them to get started with JITT immediately. Most likely beneficiaries of this workshop are faculty teams who have explored alternatives to traditional passive teaching and learning and are ready to explore alternative methods. They will need to commit themselves to the active learner approach. They will also need institutional technical support to be able to utilize the underlying web technology. For more information about JITT please visit the JITT website: http://www.jitt.org. The workshop homepage is at: http://134.68.135.1/chautauqua2005/index.html.

For college teachers of: natural sciences, social sciences, engineering, and mathematics.
Prerequisites: None.

DR. NOVAK (gnovak@iupui.edu) is currently Distinguished Scholar in Residence at the United States Air Force Academy. His home institution in Indiana University Purdue University Indianapolis (IUPUI) where he is Professor of Physics. His primary scholarly interest is the application of multimedia technology to improve undergraduate physics teaching. Over his tenure on the faculty of IUPUI, Dr. Novak has been at the heart of numerous successful innovations for undergraduate physics teaching and learning. He has extensive leadership experience with faculty workshops having given several hundred invited workshops and presentations on technology in the physics classroom over the past twelve years. He is the co-author of the JITT book: Just-in-Time Teaching Blending Active Learning with Web Pedagogy, Prentice Hall (1999). Dr. Novak has received several teaching awards, including the 1998 Chancellor's Award for Excellence in Teaching at IUPUI.

DR. PATTERSON (Evelyn.Patterson@usafa.af.mil) is Professor of Physics and Director of the Center for Physics Education Research at the US Air Force Academy. She received her BS degree from Bucknell University, where she majored in Physics and minored in Music, and her Ph.D. in experimental cosmic ray physics from the University of Delaware, where she worked with high altitude balloon and satellite experiments. Dr. Patterson joined the faculty of the US Air Force Academy in 1993.

DR. BENEDICT is a Professor of Psychology at James Madison University where he has taught for over 20 years. He received his Ph.D. and MS degrees in biopsychology at the University of Massachusetts at Amherst and his BA degree at Oberlin College. Computers have been part of his teaching for many years. He has written several computer packages for use in instruction including a simple data analysis and problem solver for use in statistics, and a widely-used computer simulation of Pavlovian Conditioning.

DR. MARRS is an assistant Professor at IUPUI, doing research in the area of Biology Education to advance the Department of Biology's commitment to student learning. Her research focuses on investigating the use of technology in the classroom to improve active learning, and determining strategies for student success in college science.

IS A HISTORY OF SCIENCE POSSIBLE?
ELOF AXEL CARLSON, Stony Brook University
June 9-11, 2005 Stony Brook Manhattan, NYC
Apply: SUSB

The history of science, until the 1950's, was largely narrative in approach and presupposed a reconstruction of the past (a good example is E. Nordenskiöld's History of Biology). Challenges to this view included a Marxist interpretation of the history of science (especially economic and political influence on the interpretation of history) as exemplified by J.D. Bernal's History of Science. The philosophy of science also merged with the history of science in the 1960's through works of T.J. Kuhn (especially his The Structure of Scientific Revolutions) producing what has become the most recognizable philosophy of science (paradigm shifts). Also Karl Popper introduced the idea that science is valid if it has the potential to be falsifiable by testing. In the 1980's some interpreters of the history, sociology, and philosophy of science have argued that not only is the history of science a construction held together by consensus, but so are the major theories of science (e.g. Darwinism is capitalism writ large?). Most scientists disagree with these assertions and rely on observation, experimentation, and technology as the necessary means to gain and interpret new knowledge. We will discuss these interpretations of the history and philosophy of science and use examples primarily from the history of classical genetics. Carlson's books The Gene: A Critical History (1966); Genes, Radiation, and Society: The Life and the Work of H.J. Muller (1981); and Mendel's Legacy: The Origin of Classical Genetics (2004) will be used to illustrate responses to these interpretations of the history and philosophy of science as well as those events that support non-narrative interpretations. Participants will analyze alternate models of interpretation and what evidence or criteria they would need to satisfy scholarly standards. Participants can be from science, social science, philosophy, or other pertinent backgrounds because the basic science will be developed in class discussion. Participants are expected to have read at least one of Carlson's books on the history of genetics and to have read Kuhn's Structure of Scientific Revolutions. Participants will gain insights into the personalities of major scientists and the contending ideas at the time major components of classical genetics were worked out.

For college teachers of: all disciplines.
Prerequisites: None.

DR. CARLSON is a geneticist and historian of science. He is the author of several books in the history of genetics, including most recently, The Unfit A History of a Bad Idea (2001) and Mendel's Legacy: The Origin of Classical Genetics (2004). He taught at Queens University (Ontario) and UCLA before coming to Stony Brook University in 1968 where he stayed until his retirement in 2001. He is the recipient of the Harbison Award for gifted teaching of the Danforth Foundation and a Fellow of the AAAS. Carlson also has written a newspaper column on the life sciences since 1997. It appears in three North shore newspapers on Long Island, NY.
WOMEN AND MINORITIES IN THE SCIENCES: HOW FACULTY CAN MAKE A DIFFERENCE
CATHERINE DIDION, International Network of Women Engineers and Scientists (INWES)
JAMES H. STITH, American Institute of Physics

June 16-18, 2005 Washington, D.C.
Apply: SUSB

This course, after a brief review of the current status of women and minorities in the scientific fields, will emphasize how one can develop effective strategies for recruiting and retaining women and underrepresented minority students in all scientific disciplines. This course is highly interactive and was developed to be a resource for science educators on encouraging underrepresented populations to participate in the sciences. We will explore the role of mentoring in developing future scientists and engineers, the current research on women and minority scientists, and how it can have an impact on one's devising solutions to increase the number of women and minorities in the sciences. Readings will include accounts by women and minority scientists. The course will include feminist and minority critiques of some scientific research. We will analyze a series of actual case studies on faculty-student interactions as a tool to review how one can encourage all students in the classroom. Participants are encouraged to bring examples of courses, programs, and other activities they have developed to address women and/or minorities in science. This course will use external speakers, including young scientists of color, to share their experiences and give feedback on how faculty can make a difference.

Possible reading include: Nobel Prize Women in Science: Journeys of Women in Science and Engineering: Minorities: Trying to Change the Face of Science, and a collection of case studies on faculty interaction with their students.

For college teachers of: all disciplines.
Prerequisites: None.

CATHERINE DIDION is the Director of the International Network of Women Engineers and Scientists (INWES). Previously she was the Executive Director of the Association for Women in Science (AWIS) for 14 years. During her tenure as AWIS, she developed an award winning mentoring program and was the principal investigator for several studies on the academic climate for women faculty and students. She is a frequent speaker on women in science, has provided testimony on several occasions to Congress, and wrote a bimonthly column Women in Science for the Journal of College Science Teaching for over a decade. As one of the official representatives for AWIS to the U.N., she headed the delegation to the Fourth World Conference on Women in Beijing and co-chaired the first science and technology caucus at a U.N. women's conference.

DR. STITH is the Vice President of Physics Resources for the American Institute of Physics. He directs a broad portfolio of programs and services that includes AIP's Magazine Division, the Materia and Government Relations Division, the Education Division, the Center for History of Physics, the Statistical Research Division and the Careers Division. His Doctorate in physics was earned from The Pennsylvania State University, and his Master's and Bachelor's degrees in physics were received from Virginia State University. A physics education researcher, his primary interests are in Program Evaluation and Teacher Preparation and Enhancement. Throughout his career, he has been an advocate for programs that ensure ethnic and gender diversity in the sciences. Dr. Stith was formerly a Professor of Physics at The Ohio State University and also spent 21 years on the faculty of the United States Military Academy, at West Point. He has also been a visiting Associate Professor at the United States Air Force Academy, a Visiting Scientist at the Lawrence Livermore National Laboratory, a Visiting Scientist at the University of Washington, and an Associate Engineer at the Radio Cooperation of America. He is a past president of the American Association of Physics Teachers, past president of the National Society of Black Physicists, a Fellow of the American Association for the Advancement of Science, a Fellow of the American Physical Society, a Chartered Fellow of the National Society of Black Physicists, and a member of the Ohio Academy of Sciences.

TEACHING A COURSE IN COMBINATORIAL MATHEMATICAL GAMES
MORTON BROWN, University of Michigan

June 16-18, 2005 Stony Brook Manhattan, NYC
Apply: SUSB

Play is a powerful teacher. It can be used effectively in the mathematics classroom. I've developed and have taught (three times at Michigan) a course in "mathematical games" for students who have had at least undergraduate mathematics and might be interested in a possible minor or major in math. Its goal is to attract into math, students who like math but may believe, unfortunately, that math consists only of calculus or calculus/linear algebra. The course consists of analyses of a variety of two person combinatorial games (NOT classical matrix game theory), that is, two person, finite 0-sum games of perfect information. The goal of the course is to introduce students to basic generic ideas of mathematics: searching for patterns, thinking logically and systematically, problem solving (modifying problems, breaking down problems into smaller easier problems, generalizing and abstracting), choosing effective notation, careful attention to the logic of arguments (including argument by contradiction, generalizing, abstracting (ex. recognizing isomorphism), and finally, seeing how "real mathematics" enters into ordinary problems. The course fits comfortably with a cooperative learning environment. Participants will receive an overview of this Michigan course, strategies for teaching it, student solutions to the games, and student reaction to the concepts and the mathematics.

For college teachers of: undergraduate mathematics
Prerequisites: None.

MORTON BROWN is Professor of Mathematics at the University of Michigan. His research interests have included topology and dynamical systems. He is a recipient of the American Mathematical Society's Oswald Veblen Prize in Geometry. Professor Brown has served on numerous national oversight, and review committees concerned with calculus and educational reform. He has served as the Mathematics Department's Associate Chair for Education, and on the policy board of the University's Center for Research on Learning and Teaching. He was an original member of the MAA-AMS CRAFTY sub-committee concerned with calculus reform and elementary undergraduate teaching. He was principal investigator for an NSF grant that helped implement Michigan's well-known Calculus Reform Program. He is an advisor to the AMS/MAA, NeXt program for new mathematics Ph.D.'s. As a result of his teaching efforts and innovations, he received "Excellence in Teaching" awards from the University in 1992 and in 1993 and was named Arthur F. Thurnau Professor of the College of Literature Science and Arts.

DESIGNING WEB-BASED LEARNING ENVIRONMENTS (E-LEARNING)
THOMAS T. LIAO,
JOANNE ENGLISH DALY, Stony Brook University

June 23-25, 2005 Stony Brook, L.I., N.Y.
Apply: SUSB

Web-based learning (e-learning) offers flexibility to students while placing additional pressures on faculty who are asked to transform traditional classes into distance learning (DL) experiences for students. The diffusion of web-based learning activities within higher education has the potential to both enhance traditional university
courses and offer global distance-learning opportunities to students. Modes of distance learning continue to increase. Currently, the fastest growing model of DL is "web-based distance learning."

The use of e-learning techniques has grown based on student demand; as students balance a desire for traditional on-campus experiences with a need for expanded learning opportunities without geographic and/or time constraints. This course will offer participants an opportunity to construct techniques and develop strategies for developing learner-centered, interactive activities, which will lead to successful web-based environments. Hands-on sessions will offer participants experience and using Macromedia Dreamweaver and BlackBoard.

Within this workshop each participant will generate and share ideas for use in both traditional and computer-based settings. This workshop is for faculty who have an interest in investigating the design of distance learning environments, new designs who are challenged to develop highly interactive web-based activities, and experienced distance learning instructors.

For college teachers of advanced disciplines.
Prerequisites: No prior computer programming experience required, but participants should be intermediate to advanced computer users. Participants wishing to use Dreamweaver following the course will need to purchase a copy for their personal or school use. A full working version can be downloaded at http://macromedia.com/software/dreamweaver/.

DR. LIAO is a Distinguished Teaching Professor Emeritus in the Department of Technology and Society and the co-editor of the Journal of Educational Technology Systems. He has designed web-based courseware and taught web-based courses.

JOANNE ENGLISH DALY is the Director of Undergraduate Studies in the Department of Technology and Society. She has designed and taught many web-based distance learning courses. Over the past six years she has worked with over one hundred educators as they transformed their traditional classes into web-based environments.

USING CASE STUDIES TO TEACH SCIENCE - A WORKSHOP
CLYDE FREEMAN HERRIED, University at Buffalo, National Center for Case Study Teaching in Science
June 23-25, 2005 Stony Brook Manhattan, NYC
Apply: SUSB

Case studies have been used to teach students in law and business schools for over a hundred years. These cases are stories with an educational message. Case study instruction has been used in medicine under the terminology of Problem Based Learning where each patient is a case to be diagnosed and treated. The value of the case approach in the classroom is that it puts the subject matter in context rather than presenting the material as a series of isolated facts and abstract principles. When information is put into story form it is easier to learn and remember. It has particular appeal for students put off by science taught in the traditional lecture style.

The purpose of the Case Study Workshop is to teach faculty about the different types of case study methods of instruction along with their strengths and weaknesses, how to teach with case studies, and how to write cases and teaching notes so that other individuals can use them. This is a highly interactive workshop where participants experience case study teaching from the student's viewpoint first, then they will write their own cases which they can take home and use in their classes. An independent survey of several hundred faculty who have attended our case study workshop indicates that virtually all instructors report higher student satisfaction with this method of presentation compared to traditional lecture method, as well as greater student attendance, and higher grades.

For college teachers of all disciplines.
Prerequisites: None.

DR. HERREID holds the State University of New York's title of Distinguished Teaching Professor. He was trained as a biologist at Johns Hopkins University and Pennsylvania State University, and he has held positions at the University of Alaska, Duke University and the University of Nairobi. He has won every major teaching award at the University at Buffalo, and he established the university's Teaching Assistant Training Program. In addition to teaching the large introductory Biology class, he regularly conducts small seminar courses on case studies in science to Honors Students. Dr. Herreid is the Academic Director of the university Honors Program and founding director director of the National Center for Case Study Teaching in Science. The National Science Foundation and the Pew Charitable Trusts have supported the Center for many years. Its web site is located at http://ublib.buffalo.edu/Library/Projects/Cases/Cases.html where there are 150 peer-reviewed cases published in all science disciplines including engineering and math. Dr. Herreid writes a regular column on case teaching in the Journal of College Science Teaching. Many of these articles are also published on the web site for the National Center.

SCIENCE AND SOCIAL JUSTICE
ALAN MCGOWAN, New School University
June 27-29, 2005 - Stony Brook Manhattan, NYC
Apply: SUSB

This course will focus on the various ways that science has been used, and misused, in the cause of social justice. In addition to the science itself, we will examine the lives of several scientists who have used their science as well as their prestige to further social causes in which they believed.

Among the topics to be covered are: Eugenics, IQ, the environment, particularly in its early days, race and racism, and nuclear and security issues. Among the scientists we will examine are: Albert Einstein, Charles Drew, Stephen Jay Gould, Sidney Drell, Frank von Hippel, and Marie and Irene Curie. Students will study genetics, nuclear theory, and environmental science, in the course of the weekend's work.

For college teachers of all disciplines.
Prerequisites: None.

Mr. McGowan is the Founder and President of the Gene Media Forum, a non-profit organization that focuses on providing information on all aspects of the genetic revolution to journalists. The Forum's purpose is to stimulate a wide debate on the ethical, social, and scientific aspects of genetics and related fields. He is also chair of the Science, Technology and Society Program at Eugene Lang College and of the science program in the University Undergraduate Liberal Studies program, both of New School University in New York City. He was President of the Scientists' Institute for Public Information for twenty years, a major bridge between the scientific community and the media. He has written extensively on science policy and public understanding of science issues.

BOMBS, CARROTS AND STICKS
GEORGE A. LOPEZ, University of Notre Dame
July 7-9, 2005 Stony Brook Manhattan, NYC
Apply: SUSB

This course examines the underlying theory, application and assessment of the use of economic means of coercion (e.g., economic sanctions) and incentives (e.g., economic aid) in a number of contemporary problems of international relations and global security. The course will begin with an overview of 1989 - present in which sanctions were employed with increased frequency in dealing with violent conflict in Iraq, the former Yugoslavia and sub-Saharan Africa. Then we examine how and under what conditions economic measures control the
Proliferation of Atomic, Biological, and Chemical (ABC) weapons in potential or real producer nations (South Africa, Libya, Iran, Iraq, N. Korea, etc.). Another policy area for study will be the use of economic means for dissuading states and other authoritative actions from aiding and abetting transnational terrorism. Some emphasis will be placed on the use of targeted financial sanctions in multilateral control of terrorist finances since 9-11.

**For college teachers of:** political science, economics, peace and security studies.

**Prerequisites:** The material in this course is suited to college teachers on international security, political science, law and economics.

**DR. LOPEZ** is Senior Fellow at the Joan B. Kroc Institute for International Peace Studies at the University of Notre Dame. Dr. Lopez's research interests focus primarily on the problems of state violence and coercion, especially economic sanctions, and gross violations of human rights. He also has an interest in ethical issues related to these questions. His work has been published in *Chitty's Law Journal, Human Rights Quarterly, The Bulletin of the Atomic Scientists, International Studies Quarterly, The Fletcher Forum, Journal of International Affairs, The International Journal of Human Rights, and Ethics and International Affairs and Foreign Affairs*. Working with David Cortright since 1992, he has written five books and more than twenty articles and book chapters on economic sanctions. Their *The Sanctions Decade* was named a Choice magazine Outstanding Academic Book in 2001.

**TROPICAL FORESTS OF COSTA RICA**

BARBARA L. BENTLEY, Noetica Naturalists

**July 13-18, 2005 (Extension July 19-21)**

Costa Rica

**Apply: SUSB**

*Note: this course will be conducted in Costa Rica under the auspices of the Organization for Tropical Studies (OTS). Participants must make their own arrangements for transportation to San Jose, Costa Rica. A course fee to cover in-country costs for lodging, meals, transportation, and OTS fees will be paid by the participants. The course fee is projected to be $630 for six (6) days plus $310 for participants attending the post-course extension. (The course fee is subject to change depending on international exchange rates.)*

Tropical Forests of Costa Rica provides an introduction to the complexity and diversity of tropical forests ecosystems. Course activities include natural history walks in virtually undisturbed forests and full-day field exercises designed to demonstrate research and teaching techniques in the field. Evening discussions focus on the natural history of tropical forests, the design of field activities for university field courses, and examination of issues surrounding the conservation of tropical ecosystems.

The courses starts with a 2-day visit to the world-famous La Selva Biological Station located in a rainforest at the foot of the Volcan Barba in the Atlantic lowlands of Costa Rica. The second half of the course is a visit to the Palo Verde Field Station, located in a tropical dry-deciduous forest in Guanacaste Province of northwestern Costa Rica. Although Palo Verde is only about 100 miles from La Selva, the forest here is strikingly different. Most trees lose their leaves during the dry season (November through April), yet the dry season is the peak of flowering for many species. During the drive from La Selva to Palo Verde, we will stop at a hydro-electric/irrigation project where conservation of natural environments comes fact-to-face with economic development.

This year we will be offering a three-day post-course extension to visit the OTS Las Cruces Field station, near the town of San Vito in southern Costa Rica. This station is located at mid elevation, and features both a world-class botanical garden as well as agroecological and restoration ecology research projects. The site is ideal for undergraduate courses.

*For college teachers of:* environmental sciences, field biology or related courses. This course is especially appropriate for teachers early in their careers.

**Prerequisites:** None.

**DR. BENTLEY** is a plant ecologist studying the effects of global environmental change on ecological interactions. She has done extensive research in the tropics, not only in Costa Rica, but in Brazil, Venezuela, Liberia (West Africa), and Kenya. She has been associated with the Organization for Tropical Studies since she did her dissertation work in Costa Rica in 1970-72. Over the years she has taught many field courses and is very familiar with issues of natural history and conversation.
2005 CHAUTAUQUA SHORT COURSE APPLICATION
STONY BROOK

Note: Enclose a check for the $60.00 application fee made out to: Stony Brook Foundation #2-95380. Photocopy as needed.

APPLICATION FOR:

Course: ____________________________
Alternate Course: ____________________________

Name: Mr. Ms. Mrs. Dr. Last: ___________ First: ___________ Initial: ___________
Office Address: Department: ___________ Institution: ____________________________
Institution Address: ____________________________
Phone: ( ) ___________ City, State, Zip: ____________________________
Fax: ( ) ___________ E-Mail: ____________________________ Mailing Address: Office __ Home
Home Address: Number-Street ____________________________
City, State, Zip ____________________________ Phone: ( )
General Background: Male Female Year of Birth: ____________________________
Your Highest Degree: Institution: ____________________________ Year: ____________________________
CURENT POSITION:
Type of Institution: Public Private Two-Year Four-Year
Highest Degree Offered: Associate Bachelors Masters Doctorate
Your Main Responsibility: Teaching Research Admin. Other (Specify)

Your Major Subject Matter Responsibility: ____________________________

TEACHING BACKGROUND:
Number of Years Taught at: College Secondary Other ____________________________
Courses Ordinarily Taught: ____________________________

Previous Chautauqua Experience: (Course, Center, Year) ____________________________
Required Statement of Interest: On an attached sheet indicate why you want to take this course (and alternate). How will your institution?

Signature: ____________________________

Special services or accommodations needed due to disability: ____________________________

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