

PROGRAM DESIGN

The Junior Visiting Faculty Development Institute is purposefully designed: 1) to expose the junior faculty from Latin America to alternative teaching pedagogies through a series of seminars and workshops; 2) to provide networking opportunities with University of Texas at Austin faculty in related fields through informal and formal means (i.e. faculty mentors); and, 3) to gain insight into how research is carried out at the university and its relationship to the private sector through site visits to various research centers (both on and off campus) and private companies. The calendar of activities (enclosed) reflects the program's structure. Program components consist of: seminars, curriculum design and research workshops, site visits, networking opportunities, and intercultural experiences.

The program will be further tailored to the participants' specific training needs once the selected junior faculty members and a needs assessment of each participant can be conducted. Once the assessment is complete, we will strategically select site visits both on and off campus that are relevant to the participants' field of study. In addition to matching the visiting junior faculty with appropriate faculty mentors in their specific fields or areas of research, we will identify courses in the math and sciences utilizing innovative teaching practices that the participants can observe. Finally, we will conduct an English language needs assessment in order to tailor the English support course to match their skill level. Vice Provost for International Programs Janet Ellzey, whose academic home is in the Cockrell School of Engineering, is committed to the Junior Visiting Faculty Development Institute. The participants will come away with a world-class experience that meets their specific needs as well as the objectives of the Office of Academic Exchange Programs at the Bureau of Educational and Cultural Affairs.

ACADEMIC PROGRAM

The Center for Teaching and Learning (CTL) will lead the academic program with experts in the field of innovative pedagogical methodologies that include curriculum development for math and science, distance education and internet-based technologies. CTL will conduct nine seminars focusing on innovative teaching practices. The seminar topics include:

- Seminar 1: Team Based Learning
- Seminar 2: Peer Instruction
- Seminar 3: Open Learning Initiative
- Seminar 4: Course Transformation Program for Math and Science
- Seminar 5: Higher Education Policy and the Productivity Challenge
- Seminar 6: College Readiness Initiatives
- Seminar 7: Backward Design
- Seminar 8: Assessment in Higher Education: Using Evidence-Based Teaching Practices to Inform and Improve Instruction
- Seminar 9: Rethinking the Role of Technology in Higher Education

SEMINAR 1: TEAM-BASED LEARNING (TBL)

Presenters: Dr. Larry Michaelsen, Professor of Management, University of Central Missouri; Dr. Michael Sweet, Director of Instructional Development, Center for Teaching and Learning, University of Texas at Austin

Abstract: As class sizes continue to grow, college teachers are increasingly looking for ways to engage students in classes that run into the hundreds. In this workshop, participants will experience Team-Based Learning (TBL), an instructional strategy that both teachers and students have reported increasing levels of student attendance, preparation, participation and critical thinking. This specific form of small-group learning has enjoyed increasing adoption across disciplines in the last decade. Dr. Larry Michaelsen is the acknowledged —godfather of TBL,|| having developed it over the last three decades. Dr. Michael Sweet has published and presented widely on TBL, and is the 2011-2013 president of the international Team-Based Learning Collaborative.

Upon completing this workshop, participants will be able to:

- Explain the structural flaw in most "traditional" forms of group work
- Identify three important distinctions between TBL and other forms of group work
- Describe the four practical elements of TBL
- Design an effective and enjoyable group assignment

SEMINAR 2: PEER INSTRUCTION (PI)

Presenter: Dr. Julie Schell, Postdoctoral Fellow, Harvard University

Abstract: How can I help my students learn in ways that pique their interest and enrich their subject matter understanding? We will explore this perennial question by considering an innovative, research-based teaching method called Peer Instruction (PI). Originally developed by Eric Mazur to address major gaps in students' conceptual knowledge of physics at Harvard University, this interactive pedagogical method is now widely used in classrooms at hundreds of institutions across the world. PI leverages the power of social learning and the latest advances in instructional technology to confront students' misconceptions and activate their minds while providing instant feedback to faculty. We will discuss the research supporting PI and the Next Generation of PI—a new, highly advanced social learning system we are currently piloting in the Mazur Group.

SEMINAR 3: OPEN LEARNING INITIATIVE (OLI)

Presenter: Ross Strader, Scientific/Technical Specialist, Office of Technology for Education, Carnegie Mellon University

Abstract: Using intelligent tutoring systems, virtual laboratories, simulations, and frequent opportunities for assessment and feedback, the Open Learning Initiative (OLI) builds courses that are intended to *enact instruction*--or, more precisely, to enact the kind of **dynamic, flexible,** and **responsive** instruction that fosters learning. This workshop will provide an overview of OLI and how it can be applied to improve course redesign and student learning.

SEMINAR 4: COURSE TRANSFORMATION PROGRAM FOR MATH & SCIENCES (CTP)

Presenters: Dr. David Vandebout, Associate Professor, Department of Chemistry and Biochemistry; Dr. Cathy Stacy, Assistant Dean, Division of Statistics and Scientific Computation; Dr. K. Sata Sathasivan, Senior Lecturer, School of Biological Sciences

Abstract: Currently in its first year, the Course Transformation Program is an initiative of the Office of the Executive Vice President and Provost, supported through work by the Center for

Teaching and Learning (CTL) at the University of Texas at Austin. The program is designed to promote higher levels of success across the university's large, lower division gateway courses. Over the next three to five years, CTL will partner with faculty to redesign eight to ten such courses.

The program focuses on several key areas related to course design: the development of concrete learning outcomes related to foundational academic skills and core conceptual knowledge, advancing methods used to evaluate and assess student learning, and transforming the educational model through the use of innovative instructional techniques and technologies.

The three projects selected for the first round of the CTP include Introductory Biology (BIO 311 C & D), Principles of Chemistry (CH 301 & 302), and a statistics course, Data Analysis for the Health Sciences (SSC 302). The faculty team leaders for the course redesign projects are Dr. Sata Sathasivan (Biology), Dr. David Vanden Bout (Chemistry), and Dr. Cathy Stacy (Statistics). Cumulatively, enrollment in these courses represents over 9,000 students. This workshop will provide an overview of lessons learned during the first year of the Course Transformation Program.

SEMINAR 5: HIGHER EDUCATION POLICY AND THE PRODUCTIVITY CHALLENGE

Presenter: Dr. Harrison Keller, Vice Provost for Higher Education Policy and Research and Executive Director of the Center for Teaching and Learning, University of Texas at Austin.

Abstract: Policymakers and the public are increasingly aware that the economic vitality and competitive position of their communities, states, and nations depend significantly on getting more people into and through higher education. Given the condition of the economy in the United States and many other countries, however, large infusions of public funds into colleges and universities seem unlikely. A number of policy options have been proposed to raise tertiary educational attainment rates while improving the return on existing investments. Can the costs of higher education be contained without sacrificing program quality? In this session, students will gain an overview of recent policy discussions in the United States regarding higher education efficiency and educational productivity. In particular, we will examine intersections between the financing of higher education and broader educational goals. We will consider ways

in which institutional, state, and federal policy regarding academic program design, student preparation, financial aid, finance, admissions, placement, and accountability can facilitate or impede student success.

SEMINAR 6: COLLEGE READINESS INITIATIVES

Presenter: Dr. Cassandre Alvarado, Assistant Dean, School of Undergraduate Studies, University of Texas at Austin

Abstract: College readiness is one of the most pressing issues in higher education today. Students are entering college underprepared to engage in the rigors of undergraduate study, which results in a number of consequences for institutions. A high dropout, failure, and withdrawal rates limit students' abilities to take full advantage of their college experience and has substantial cost implications for institutions. Yet, most students, parents and secondary educators rely simply on expectations of credit accumulation and standardized exams to assess readiness. College readiness is more than content knowledge; it involves an amalgam of key cognitive strategies, content knowledge and overarching academic skills, academic behaviors, and contextual skills and awareness. Current research at UT Austin seeks to connect the articulation of prior knowledge expectations with rigorous diagnosis and support of non-content readiness skills as a key factor in supporting student success.

SEMINAR 7: BACKWARD DESIGN

Presenters: Dr. Julie Schell, Postdoctoral Fellow, Harvard University; Dr. Michael Sweet, Director of Instructional Development, Center for Teaching and Learning, University of Texas at Austin.

Abstract: In this workshop participants will go through the process of developing effective learning goals using the non-conventional approach of Backward Design (Wiggins and McTighe). After taking this workshop, new or experienced instructors will be able to identify best practices for preparing effective learning goals and revise a set of more traditional learning goals based on those best practices.

SEMINAR 8: ASSESSMENT IN HIGHER EDUCATION: USING EVIDENCE-BASED TEACHING PRACTICES TO INFORM AND IMPROVE INSTRUCTION

Presenter: Dr. Dawn Zimmaro, Senior Director and Director of Assessment, Center for Teaching and Learning, University of Texas at Austin

Abstract: How can teaching approaches be measured and determine whether or not students are *really* learning what was intended? In this workshop we will explore various approaches to giving *and* receiving feedback throughout the course (formative assessment) that can be used to make data-based changes while teaching. We will also identify ways to collect evidence on what is working with individual teaching approaches and how that impacts student learning.

SEMINAR 9: RETHINKING THE ROLE OF TECHNOLOGY IN HIGHER EDUCATION

Presenter: Susanna Wong Herndon, Director of Instructional Technology, Center for Teaching and Learning, University of Texas at Austin

Abstract: Higher education institutions are re-examining the role of technology on their campuses, especially as they begin to recognize that today's students are true digital natives—a generation comfortably immersed in the wired world, conversant with multiple streams of media, at ease with instant geo-locating and posting to the web in real time, and eager to remix content and connect online to share it across the globe. How can educators harness technology to support such students' efforts to achieve their academic goals and be successful in their learning? In this workshop we will consider the changing relationship of technology to pedagogy and assessment, explore ways to leverage key technologies that maximize learning, rethink the framework for effective use of learning technologies, and survey some of the technology tools that can bridge learning in the classroom with students' time spent outside of class. We will also review examples of the best technology practices that: support course activities that augment and enhance existing instructional approaches, create new learning activities, represent course content, facilitate student and faculty collaboration, and support the assessment of student learning outcomes.

CURRICULUM DESIGN (CD) AND RESEARCH SUPPORT (RS) WORKSHOPS

CD1: Student Motivation: Motivation has been identified as the most important factor in determining a person's success or failure at any complex task. However, several studies have shown that teachers identify motivating students as an area of weakness in their training. The purpose of this workshop is to demonstrate the importance of proper motivation in a classroom setting, identify relevant models of motivation, and apply the main principles of those models to curriculum design and teaching. The workshop will be an interactive experience where the participants are asked to evaluate their own attitudes about motivation, participate in sample lessons and reflect on the principles of motivation they observe, and where they apply those principles to what they are learning about curriculum development in their other courses.

CD/CC 2: Information Literacy: The ability to locate, evaluate and use information has always been important, but in today's Information Age, with the explosion of online library and Internet resources, these abilities take on a new urgency. Having more information from which to choose can make research more difficult rather than easier. Often the easiest information to find is unfiltered or unreliable, making information literacy skills more important than ever. Students are more likely to learn the concepts and skills in the context of an academic course when they have an information problem to solve. For that reason, information literacy best practices recommend integrating the teaching of information literacy into the curriculum. Ideally, information literacy competencies are sequenced and integrated into the curriculum of an academic department.

CD 3: Getting Started with Google Docs: This session will focus on how to use Google Docs to share and collaboratively create documents and spreadsheets. Having the knowledge of various technologies and how they can be integrated into the curriculum can foster innovative teaching techniques.

CD 4: Getting Started with Wikis: This session will focus on how to create a wiki to enhance collaborative online learning.

CD 5: Curriculum Design: Presentation by Center for Math & Science

CD 6: Curriculum Design: Presentation by the Dana Center for Mathematics and Science Education.

RS 1: Conducting a Literature Review: Session will focus on how a literature review is structure, how to use background information to shape research questions, how to find examples of literature review, and how to get brief overview of the types of tools and resources available to find, evaluate and cite sources.

RS 2: Finding Scholarly Articles: Session will focus on how to find articles on any research topic using the databases and electronic journals.

RS 3: Meeting with Librarian Specialist: Participants will meet with librarian specialists in their academic discipline. The meeting will focus on the research guides available through the libraries and how to utilize librarian assistance in research efforts.

ENGLISH SUPPORT COURSE

ESL Services will offer one hour each day of English support. The main purpose of this course is to assure that the participants in the program understand and apply as much as possible from their content classes, workshops, and other program activities. The support courses will focus on clarifying relevant vocabulary, learning to participate in academic discussions, extracting meaning from academic texts and journals, and producing curricula and syllabi using correct English conventions and format. All of the activities in the course will be based on the content from the other program activities. The course will be taught by ESL professionals with over 20 years of relevant experience.

NETWORKING

The University of Texas at Austin will provide junior faculty members with multiple opportunities to develop professional networks. This will be accomplished through:

- Pairing each junior faculty with a UT Austin faculty member within the Cockrell School of Engineering and College of Natural Sciences (depending on the junior faculty member's academic discipline) who will serve as their faculty mentor during the institute. Faculty mentors will be asked to commit to meeting with the participant once a week to discuss research and interact with other departmental faculty. The College of Natural

Sciences, the College of Engineering and the Lozano Long Institute of Latin American Studies (LLILAS) will assist in identifying appropriate faculty members to serve as mentors.

- A networking dinner with the visiting junior faculty and their UT faculty mentors, as well as current Fulbrighters at the university, local Fulbright alumni, and other relevant faculty researchers.
- Visits to both on-campus research and learning center and local industry where participants will have the opportunity to meet key people at each of the visits.

SITE VISITS

Site visits will help expand the junior faculty member's knowledge on how various disciplines solve real world problems through investigative research and technological innovation. The participants will visit relevant entities on the University of Texas at Austin campus and locally.