

## **Loyola University Chicago**

### **Instructional Strategies**

### **Latin American Teachers of High School Science and Math (FLACSI and ACODESI)**

**Participants must have an advanced level of skill in English**

**June 28 – July 23, 2010**

This four week program will provide a series of one week seminars for Science Teachers and Math Teachers. Week one will focus on English as a Second Language preparation and beginning work in the subject areas. Week two will continue to focus on a specific subject area (Biology or Math) and weeks three and four will integrate the content developed in week two with specific teaching strategies for curriculum development and using technology and computers in the classroom.

All of the seminars will be taught in English and will include the services of a bilingual graduate student who will attend the seminars and meet regularly with participants.

### **Week One: English as a Second Language and Excursions**

During the first two days of the program participants will attend specialized English language sessions in preparation for their work in the seminars. Participants will practice all skill areas (reading, writing, listening, speaking) through a variety of interesting and enjoyable activities. The focus will be on preparing for the School of Education seminars. In addition to language skill development, participants will visit local Jesuit high schools and museums and learn about Chicago and all it has to offer.

During the remainder of the first week, participants will meet with their subject area instructors to begin working on their topic areas.

### **Week Two: Continue with Subject Area Seminars**

#### *Seminar for Biological Science Teachers*

In this seminar series, we will make use of extensive hands-on, laboratory based methodology that incorporates current education theory on how students best learn complex material in the natural sciences. Specifically, our lectures and laboratory experiences will involve individual and team-based investigations focused in the general area of human anatomy and physiology. Participants will learn to collect data, examine it both qualitatively and quantitatively, form testable hypotheses and draw appropriate conclusions.



### *Seminar for Math Teachers*

In this seminar, participants will explore the content of secondary mathematics as well as contemporary methods for delivering instruction. The content will include Algebra 1, Geometry, Algebra 2, Trigonometry and Statistics. The focus of instructional strategies will be how to actively involve the student in doing mathematics and discovering concepts. To this end, students in this course will be involved in activities, experiments and technology that supports an inductive inquiry process.

### **Week Three: Curriculum Design**

In this highly interactive seminar, participants will have the opportunity to apply the principles of backwards design as outlined by Wiggins and McTighe in *Understanding by Design*. The session will demonstrate how to make a complex topic easy to understand and to apply it within a school context. It will also include extensive work with rubrics. Rubrics are a popular way to focus learning and to assess and report student learning. Participants will focus on what they expect the students to learn as the result of instruction.

### **Week Four: Using Technology/Computers in Teaching**

This seminar will address using technology as a tool to enhance instruction. More specifically, participants will focus on how technology can enhance meaningful learning, research and enquiry, modeling, and community building with technologies. The faculty will also present the NTeQ model for developing lesson plans that integrate technology.

### **Program Staff**

- Tenure Track Faculty from the School of Education and the Graduate School\*
- Highly qualified professional English as a Second Language professional ESOL instructor with an advanced degree in English language instruction and experience teaching Academic English in Higher Education
- Administrative support for Office for International Programs
- Bilingual graduate student who will attend the seminars with participants and meet with them on a regular basis to answer questions and help process the information presented



## Application, cost and general program information

- The program requires that participants demonstrate English language ability at the advanced level. Language ability will be assessed as part of the application process.
- Loyola University Chicago will provide assistance to applicants in applying for the J-1 Exchange Visitor Short Term Scholar visa.
- The cost for this program is \$3000. This includes tuition, room, fees and board (in shared apartment-style housing). Board will cover approximately 2 meals per day in campus dining facilities. *This does not include round trip air fare to Chicago or miscellaneous expenses.*
- The program requires a minimum of 8 participants.
- Application deadline: March 15, 2010
- Tentative Dates: Arrive June 28, 2010, Depart July 23, 2010

## For Further information about this program please contact:

**Latin America Coordinator:** Alejandra Fernandez [academica@acodesi.org.co](mailto:academica@acodesi.org.co)

**Loyola Coordinator:** Mary Theis: [mtheis@luc.edu](mailto:mtheis@luc.edu)

\*Faculty information

Dr. Jim Breunlin has spent the past thirty years teaching high school and junior high school mathematics. He has served as the chairman of a large high school math department, is a National Board Certified Teacher and been a contributing author of two mathematics books. The title of his latest book, "Experiencing Mathematics" reflects his philosophy of teaching mathematics: learning by doing. Dr. Breunlin joined Loyola University Chicago's School of Education this past year as a clinical assistant professor.

Dr. Warren R. Jones, Ph.D. is an associate professor in the departments of Biology, Loyola University Chicago, and the department of Cell Biology, Neurobiology and Anatomy, Loyola University Chicago, Stritch School of Medicine. He has designed and taught human anatomy, physiology and histology courses at Loyola for the past thirty years at the undergraduate and graduate levels. Most recently, he has designed a two semester human structure and function course with laboratory for biology undergraduates. In addition, for the past several years he has been involved with the development and implementation of a funded healthcare initiative in collaboration with several Cuban NGOs in Havana, Cuba.



Dr. David Ensminger is a Clinical Assistant Professor at Loyola University Chicago, where he serves as the program director for the School Technology program. He has a Ph.D. in Instructional Design and Development. His research interests include technology implementation and integration.

Dr. Ruanda Garth McCullough, Ph.D., is an assistant professor in the Department of Curriculum and Instruction at Loyola University of Chicago. She earned her doctorate and masters degrees in Urban Education at the University of Chicago. Ruanda received her BA in Psychology and African American Studies from Wesleyan University in Middletown, Connecticut. Dr. Garth McCullough has developed curriculum for new small and Charter schools as well as conducted extensive work to develop service-learning curriculum with Chicago Public Schools.

School of Education coordinator: Dorothy Giroux

