UNIV 392
Study Abroad Program: Biotechnology in India

California State University, Channel Islands
Fall, 2014
Instructor: Dr. Nitika Parmar
Meeting sessions: Wed, 12.00- 2.50 p.m.
Location: TBA
Office hours: By appt.
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Course description
This course will provide CI students an opportunity to visit India and explore biotechnology advancements there. Students will be exposed to applications in the areas of biotechnology and environmental ecology from the Indian perspective. Emphasis will be placed on demonstration of research experimentation in the fields of molecular biology, immunology, cell biology, animal husbandry, biomedical research and ecological conservation at top research institutions in three cities- New Delhi, Mumbai and Chandigarh. Students will learn about the booming biotechnology research in India on one side and the deep emphasis placed on India's ancient history, cuisine, culture, arts, religion and rich traditions on the other. The trip will include visits to well-known monuments such as the Taj Mahal as well as places of historical significance such as forts, temples and museums. One of the highlights of the course will be an educational retreat to an Ecovillage to explore environmental biotechnology.

Program Overview
Travel to India and explore the dynamic biotechnology research along with its traditions and culture. Over a period of three weeks, explore four major cities in India and interact with scientists and students. Experience the mix of the traditional and modern and interact with people of various backgrounds.

Course Objectives
The goal of this course is to familiarize students with techniques used in the fields of biotechnology and environmental ecology in India. The course will explore biology in the context of applied research and provide students the opportunity to observe research projects ongoing in India. The course will also offer opportunities to discuss and debate selected bioethical issues pertinent to the fields of biotechnology and the environment. Students will be expected to come to this class with a high level of intellectual curiosity with an aptitude to learn. Currency with regard to news about India and its activities through the media is expected.

Learning Outcomes
Students who successfully complete this course will be able to:

- Understand the concepts of biotechnology as practiced in India
- Explain the theory and practice of a variety of experimental techniques as practiced in India
- Understand the role of India as a booming biotechnology hub
- Demonstrate their ability to explore and appreciate the diverse nature of India's traditions

- Understand the vibrant history and culture of India

Course Format and Reading Assignments
Class will meet once a week for about three hours to understand multiple perspectives and developmental stages leading up to the modern India with a focus on the current state of biotechnology in India. Content will be delivered via lectures, journal articles, videos, media reports and a culminating visit to India. Students are expected to be actively participating in discussion both in class and after the study abroad trip. Reading assignments will be posted a week in advance and should be read prior to class meeting in order to have quality discussion sessions. Please do not use your cell phone, surf the web, or send/read emails or text messages while class is in session.

Blackboard
All protocols, announcements, syllabus, assignments and review information will be posted on Blackboard. You are highly encouraged to constantly monitor Blackboard for all communication needs.

Correspondence
I will only correspond with you at your *csuci e-mail address* for all communication needs. Please make sure you have the correct address listed on your student information page. Do not communicate with me using your personal e-mail as it may go in my junk mail.

Orientation and Workshops
Multiple (at least three) orientation sessions will be held prior to the trip and will cover all information and requirements pertinent to the trip including accommodations, travel, medical facilities, security, food, cultural expectations, shopping guidance and etiquette.

A workshop will be held after the trip whereby students will be expected to present the results of their study abroad experience in response to a survey given by the instructor.

ASSESSEMENT: The following combined assessment will be followed:

- **Pre-trip presentations (20 points):** Students will research the biotechnology practices in India as well as its culture, traditions and history and will present their findings in the form of an oral presentation in class. Each student is required to make a presentation.
- **Quiz (20 points each):** Three quizzes will be administered during the semester as well as after the trip has concluded.
- **Reflective journal (50 points):** Students should develop a steadily growing document where they are expected to record their reflections and thoughts on what they are learning about India and how it's changing their belief about preconceived notions and perceptions. Entries into the journal are required for each day spent in India.
- **Attendance (30 points)**: Students are required to attend each event/activity during the time spent in India in order to get full benefit of the international experience. A summary of each event/activity is expected to be recorded in the reflective journal. Students are also required to attend all in-class sessions at CI as well as all orientation and workshop sessions.
- **Final presentation (40 points):** After the conclusion of the trip, each student will be making a presentation about the experiences gained during the international experience in the form of a 20-page report as well as an oral presentation. Report is due within 15 days of returning back to USA

and the poster will be presented at the Sage conference which will be held at CI in May, 2015. Details will be provided during the semester.

GRADING*:* The student's course grade is computed using the standard scale:

(95–100%)	A	(90–94.9%) A–	(85–89.9%) B+	(80–84.9%) B
(75–79.9%)	B–	(70–74.9%) C+	(65–69.9%) C	(60–64.9%) C–
(55–59.9%)	D+	(50–54.9%) D	(49.9% or below) F	

Course Schedule (Class will meet every Thursday): *Schedule is tentative and subject to change.*

Date	Activity
August 27, 2014	Course Outline
September 3	Introduction to course and expectations
September 10	India- Culture and Traditions
September 17	India- Religion, Food and Art
September 24	**Pre-trip Orientation I**
October 1	India- Education system
October 8	India- Research Institutes
October 15	India- Research Institutes
October 22	**Pre-trip Orientation II**
October 29	India- Biotechnology advances
November 5	India- Biotechnology advances
November 12	**Pre-trip Orientation III**
November 19	Student presentations
November 26	**No class (Thanksgiving Holiday)**
December 3	Student presentations
December 10	Student presentations
December 17	**Final orientation**
December 26, 2014- January 18, 2015	**Trip to India**
February 2, 2015	Written reports due
May, 2015	Present posters at the Sage Forum in CSUCI

Faculty Background

Dr. Nitika Parmar is an Associate Professor of Biology at CSUCI. Dr. Parmar is originally from India and is very familiar with the people, local customs, traditions and travelling arrangements in India. She can converse in English and two local languages of the region.

Academic Dishonesty

Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration, consult the course instructor.

In accordance with CSUCI policy on academic dishonesty, students in this course who submit work of others as their own (plagiarize), cheat on examinations, help other students cheat or plagiarize, or commit other acts of academic dishonesty will receive appropriate academic penalties, which may result

in course failure. Cheating on exams will result in an “F” on the exam, likely resulting in a lower, or possibly, failing grade in the course. The catalog defines academic dishonesty to include “such things as cheating, inventing false information or citations, plagiarism and helping someone else commit an act of academic dishonesty. It usually involves an attempt by a student to show possession of a level of knowledge or skill that he/she does not possess”. The catalog describes the process for evaluating cases of dishonesty and assignment of appropriate penalties. Please refer to the University Catalog for details. The Academic Dishonesty Policy is listed below:

1. Academic dishonesty includes such things as cheating, inventing false information or citations, plagiarism and helping someone else commit an act of academic dishonesty. It usually involves an attempt by a student to show possession of a level of knowledge or skill that he/she does not possess.

2. Course instructors have the initial responsibility for detecting and dealing with academic dishonesty. Instructors who believe that an act of academic dishonesty has occurred are obligated to discuss the matter with the student(s) involved. Instructors should possess reasonable evidence of academic dishonesty. However, if circumstances prevent consultation with student(s), instructors may take whatever action (subject to student appeal) they deem appropriate.

3. Instructors who are convinced by the evidence that a student is guilty of academic dishonesty shall assign an appropriate academic penalty. If the instructors believe that the academic dishonesty reflects on the student's academic performance or the academic integrity in a course, the student's grade should be adversely affected. Suggested guidelines for appropriate actions are: an oral reprimand in cases where there is reasonable doubt that the student knew his/her action constituted academic dishonesty; a failing grade on the particular paper, project or examination where the act of dishonesty was unpremeditated, or where there were significant mitigating circumstances; a failing grade in the course where the dishonesty was premeditated or planned. The instructors will file incident reports with the Vice Presidents for Academic Affairs and for Student Affairs or their designees. These reports shall include a description of the alleged incident of academic dishonesty, any relevant documentation, and any recommendations for action that he/she deems appropriate.

4. The Vice President for Student Affairs shall maintain an Academic Dishonesty File of all cases of academic dishonesty with the appropriate documentation.

5. Student may appeal any actions taken on charges of academic dishonesty to the "Academic Appeals Board."

6. The Academic Appeals Board shall consist of faculty and at least one student.

7. Individuals may not participate as members of the Academic Appeals Board if they are participants in an appeal.

8. The decision of the Academic Appeals Board will be forwarded to the President of CSU Channel Islands, whose decision is final.

Students with Disabilities

The Disability Resource Program at CSUCI promotes and assists students with disabilities. If a student requires special accommodations for a quiz/exam, it is the responsibility of the student to deliver the

accommodations notice to the appropriate faculty or staff. Failure to notify the appropriate persons in a timely manner may result in a delay or denial of services. Accommodations may include physical adaptations and classroom modifications. Physical adaptations may be comprised of classroom arrangements and/or preferential seating. Classroom modifications may occur in one or more of the following areas: environment, materials, requirements and testing. Receiving accommodations should not be regarded as giving the student "special privileges," but rather as minimizing the impact of the disability to the greatest extent possible. The Disability Policy is listed below:
Cal State Channel Islands is committed to equal educational opportunities for qualified students with disabilities in compliance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. The mission of Disability Accommodation Services is to assist students with disabilities to realize their academic and personal potential. Students with physical, learning or other disabilities are encouraged to contact the Disability Accommodation Services office at (805) 437-8510 for personal assistance and accommodations.

Please go to http://www.csuci.edu/disability/disability.htm for further details.

Travel Fee
There is a **$1600** travel fee associated with this course. This travel fee needs to be paid at the time of registration for this class.

Itinerary

- Leave LAX on Dec 26, 2014, Friday
- Arrive in Delhi on Dec 28, Sunday
- Dec 29, Monday- visit **IIT (Indian Institute of Technology)**
- Dec 30, Tuesday- visit **NII (National Institute of Immunology)**
- Dec 31, Wednesday- visit **TERI (The Energy Research Institute)**
- January 1, Thursday, 2015- visit **TERI main facility** (Gul Pahari)
- January 2, Friday, 2015- visit **PREMAS Biotech** in the morning; late afternoon take train to Agra; night at Agra
- January 3, Saturday- Tour of Taj Mahal (stay night in Agra)
- January 4, Sunday- Explore local cottage industries; return to Delhi and spend night in Delhi
- Jan 5, Monday: Take flight to Mumbai, (stay night in Mumbai)
- Jan 6, Tuesday- visit **TIFR (Tata Institute of Fundamental Research),** (stay night in Mumbai)
- Jan 7, Wednesday- visit **IIT Powai and Piramal Life Sciences** (stay night in Mumbai)
- Jan 8, Thursday- leave for **Govardhan Ecovillage** for environmental biotechnology retreat
- **GEV Retreat** (Jan 8-12; Thurs-Monday)- **Environmental biotechnology retreat**, 5 nights in GEV
- Jan 13, Tuesday- drive to Mumbai and take flight to Chandigarh, (stay night in Chandigarh)
- Jan 14, Wednesday- visit **IMTECH (Institute of Microbial Technology)**
- Jan 15, Thursday- visit **Punjab University**
- Jan 16, Friday- visit other educational institutes (**Biotech park, CSIO**)
- Jan 17, Saturday- free day for catch up, packing, etc.
- Jan 18, Sunday- leave for Delhi to take flight to Los Angeles
- Arrive in LA on Jan 18, Sunday