THE UNIVERSITY OF TEXAS AT EL PASO
SYLLABUS
SCI 1301: Inquiry in Math and Science

RESEARCH FOUNDATIONS COURSE
FALL 2018

<table>
<thead>
<tr>
<th>Section - CRN</th>
<th>Class Meeting Day &amp; Time</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>16268</td>
<td>T/R - 12:00-1:20 pm</td>
<td>G.0706A</td>
</tr>
</tbody>
</table>

I. INSTRUCTOR INFORMATION:

<table>
<thead>
<tr>
<th>Course Instructors: Dr. Supriyo Ray</th>
<th>Dr. Joseph Pipkin</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail: <a href="mailto:sray4@utep.edu">sray4@utep.edu</a></td>
<td>E-mail: <a href="mailto:japipkin@utep.edu">japipkin@utep.edu</a></td>
</tr>
<tr>
<td>Phone: (321) 368-3635</td>
<td>Phone: X 6504</td>
</tr>
<tr>
<td>Office: CCSB 2.0412</td>
<td>Office: Bio-Sci. 5.126</td>
</tr>
<tr>
<td>Office Hours: By appointment</td>
<td>Office Hours: By appointment</td>
</tr>
</tbody>
</table>

III. COURSE EVALUATION

- Project report + Presentation 40%
- Class Participation 20%
- Attendance 20%
- Group work 10%
- Assignments 10%

GRADING SCALE
- 90 – 100 = A
- 80 – 89.9 = B
- 70 – 79.9 = C
- 60 – 69.9 = D
- Below 60 = F

Note: Students need to obtain a grade of C or better to pass this class.

IV. COURSE DESCRIPTION

This course is designed for first semester freshmen majoring in any of the STEM disciplines to assist them in preparing to participate in their choice of research-driven lab courses (research tracks): It is also intended to prepare students for participation in mentored research experiences later on. The course will develop their ability to organize, retrieve, and connect information the way expert researchers do. Centering on elements of core concepts (Big Ideas) of various STEM disciplines (chemistry, biology, social science, engineering, etc.), students will be introduced to STEM research. Through facilitated workshops, collaborative and individual work, special guest presentations and online modules, students will learn and
practice common elements of the research cycle, from idea to dissemination, including: review of primary versus secondary literature and analyzing the connectivity between various STEM disciplines; the use of university resources for information access, online bibliographic management and student assistance; proper methods to maintain a research notebook and organize research documentation; safe and responsible conduct of research, including biosafety and the use of human and animal subjects in research; formats for data presentation and methods of analysis; communicating research results to various audiences, orally and in writing; and possible career paths for individuals with STEM degrees.

During the last 6-8 weeks of the course, students will participate in a final project to gain understanding of the components of a scientific paper.

VI. Overall Course Goals

GOAL 1  Students will learn about the opportunities available and their own responsibility in ensuring their success in college.

GOAL 2  Students will learn about and practice essential academic and research skills to strengthen performance in the university setting and beyond.

GOAL 3  Students will begin to build a network of faculty, staff, and peers to create a supportive and positive learning environment.

GOAL 4  Students will assess and understand their interests, abilities, and values to efficiently pursue their academic, career, and life goals.

GOAL 5  Students will become involved in UTEP activities and utilize campus resources.

VII. Policies

- **Absences**: After 3 unexcused absences you will be given a warning. If absent 4 times, you may be dropped from the course.

- **Tardiness**: If you are late 5 or more minutes for class, 2 credit points will be subtracted.

- **Missed Exams**: Exams cannot be made up unless you provide a valid written excuse from your doctor, the funeral home director, or legal or law enforcement personnel. The written excuse must contain contact information that can be used to verify the excuse.

- **Deadlines**: Work will not be accepted after a given due date unless you provide a valid written excuse from your doctor, the funeral home director, or legal or law enforcement personnel. The written excuse must contain contact information that can be used to verify the excuse.

VII. Student Conduct

Use of laptops is allowed only when specifically requested by the instructor.

**Cell phones must be turned off.** Repeated use will result in dismissal of class for that day. Each student is responsible for notice of and compliance with the provisions of the Regents

**Academic Dishonesty:**

It is the official policy of the University that all suspected cases or acts of alleged scholastic dishonesty must be referred to the Dean of Students for investigation and appropriate disposition. It is contrary to University policy for a faculty member to assign a disciplinary grade such as an "F" or zero to an assignment, test, examination, or other course work as a sanction for admitted or suspected scholastic dishonesty in lieu of normally charging the student through the Dean of Students. Similarly, students are prohibited from proposing and/or entering into an arrangement with a faculty member to receive a grade of “F” or any reduced grade in lieu of being charged with scholastic dishonesty. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, and the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

**Plagiarism:**

"Plagiarism" means the appropriation of another person's ideas, processes, results, or words without giving appropriate credit. This includes intentionally, knowingly or carelessly, presenting the work of another as one’s own; failing to credit sources used in a work product; attempting to receive credit for work performed by another; failing to cite the World Wide Web, databases and other electronic resources. Written work will be checked for plagiarism.

**Students with Disabilities Policy:**

If you have or suspect a disability and need an accommodation you should contact Center for Accommodations and Support (CASS) at 747-5148 or at dss@utep.edu or go to Room 106 Union East Building.

**VIII. Syllabus Change Policy:**

This syllabus is a guide for the course and is subject to change with advance notice

**IX. Course Learning Objectives**

At the end of this course, you will be able to

- Define what is scientific cycle
- Generate hypotheses to address research questions
- Describe the interdisciplinary nature of research
- Organize and write clear and concise scientific journal entries
- Explain the importance of attribution of previous work
- Demonstrate critical thinking orally and in writing
- Describe the research cycle from idea to publication
• Describe the purpose of scientific communication & distinguish between primary and secondary sources
• Distinguish between peer reviewed and non-peer reviewed sources
• Effectively utilize library resources
• Discuss and utilize common statistical concepts
• Identify the limitations of statistics
• Analyze research designs
• Interpret data
• Evaluate research studies from interdisciplinary perspectives
• Discuss topics in responsible conduct of research
• Be cognizant of safety and biosafety laboratory protocols
• Demonstrate ability to present scientific information orally and in writing