



FITW FIRST IN THE WORLD
STEM-OSIP



First In The World

Supplemental Instruction Faculty Handbook

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Mission

The Department of Education (DOE) First in the World (FITW) Program funding has provided TAMUCC the opportunity to establish a new science, technology, engineering, and math (STEM) Online Supplemental Instruction Project (STEM-OSIP) that will provide online instruction to over 10,000 students over the course of four years. This project will focus on online Supplemental Instruction (SI) as the means to address global excellence through STEM graduates.

Purpose of the Research Project

The purpose of this project is to test the relative effectiveness of two different types of delivery of Supplemental Instruction (SI)--face-to-face SI and online SI--for undergraduates taking historically difficult STEM courses (i.e., STEM courses where typically 30% or more of enrolled students earn a grade of D or F or withdraw prior to the end of the semester). Why investigate the relative effectiveness of these two SI formats? Face-to-face has been the standard method of delivery for SI since the 1970s, and much evidence has been collected regarding the impact of face-to-face SI on student learning. However, many campuses across the USA find themselves with an extreme shortage of one of the most important resources for implementing face-to-face SI: classroom space. Moreover, nontraditional students, who continue to increase in number and representation on university campuses, often do not have the scheduling flexibility necessary to attend SI delivered in the traditional, face-to-face format. Due to recent advances in distance-learning technology and the ubiquity of electronic devices that feature high-speed internet access, online SI might be a viable means for replacing or augmenting face-to-face SI and thus addressing these resource-constraint and accessibility issues. However, the extent to which online SI is equivalent to face-to-face SI in terms of impact still needs to be ascertained. All questions regarding the research being conducted should be referred to the Principle Investigator, Dr. Patricia Spaniol-Mathews.

History of Supplemental Instruction

The Supplemental Instruction (SI) model is a peer-facilitated academic assistance program that was originally developed by Dr. Deanna Martin in 1973 at the University of Missouri-Kansas City, with the overall goal of identifying and supporting the most challenging courses for students. SI integrates how to learn with what to learn, incorporating collaborative learning strategies with course content. Texas A&M University – Corpus Christi (TAMUCC) SI has been available for various courses since 1997. Because of its proven success in increasing student performance and retention, SI is now offered at over 1,500 academic institutions in more than 29 countries. Studies show that students who attend SI sessions earn statistically higher final course grades than those students who do not attend, even among students who are under-prepared when they enter the course (Congos, Langsam, & Schoeps, 1997).

SI Program Goals

The SI model targets traditionally difficult academic subjects—those that have a high rate of D or F grades and withdrawals—and provides regularly scheduled, out-of-class, peer-facilitated study sessions. While all students may not take advantage of the voluntary service, it attracts an equal proportion of students from differing ability and cultural groups. Participating students receive higher measures of academic achievement in comparison to their nonparticipating counterparts by developing study strategies, such as thinking and reasoning, responsibility, and reflection, so they can successfully complete the targeted course and future courses.

The SI Program is NOT:

- Tutoring.
- Teaching or re-teaching.
- Remedial or make-up instruction.
- TA or clerical assistance for the professor.
- A replacement for other support services.

SI Sessions Are Peer Facilitated

An SI leader is a student who has received an A in the targeted course and is recommended by the professor to facilitate the SI sessions. The SI leader will maintain a professional attitude about matters such as class standards, grades, and student complaints; discourage students from attending SI as a substitute for class; share SI materials with the cooperating faculty member before use; and provide session feedback to the cooperating faculty member if requested to do so.

What Is the SI Leader NOT Permitted to Do?

The SI leader is NOT available for grading exams or papers, or to proctor exams. As a rule, we request that you not ask SI leaders to run copies and errands or to distribute exams, graded papers, and other class literature. It's important for the SI leader to maintain his/her peer status among the students in the class. SI leaders are paid to attend class, keep up with the class material, and run study group sessions. SI leaders typically do not answer questions the professor asks during the class. The SI leader is in class to get a better sense of the areas emphasized during lectures so that they can design and develop more focused SI sessions.

The SI Leader will NOT:

- Grade assignments.
- View or discuss grades.
- Proctor exams/assignments without the professor being present.
- Independently create exams/assignments for which students receive a grade.
- Re-lecture nor introduce new material. The SI Leader's responsibility is to organize and add structure to the SI sessions, allowing students the opportunity to engage in their own learning.

The SI Leader WILL:

- Act as a model student with a mastery of the discipline.
- Attend all class sessions, takes notes, and reads all assigned material for the target course.
- Conduct three in-person SI sessions and three online SI sessions per week.
- Conduct one in-person office hour and one online office hour per week.
- Continually announce in class SI session and office hour schedule and room locations.
- Write session dates and times on the board in the classroom where lecture is conducted.
- Inform students of times and locations of double sessions.

SI Leader in regards to the professor WILL:

- Interact with the professor professionally and treat them with respect.
- Meet and communicate with the professor throughout the semester to develop a positive working relationship and to discuss course content and any uncertainties regarding material discussed in the SI sessions or the lectures.
- Provide the instructor with feedback about how the sessions are going, including any handouts to be distributed or upcoming session topics.

What Goes On During SI Sessions?

A typical SI session is an hour-long meeting which might include a review of lecture and assigned readings, group work and discussion, problem-solving and critical thinking activities, or a mock exam. The SI leader's primary focus is to assist students in understanding the course material while helping them to develop effective study skills that are applicable to the content. The SI leaders will never structure SI sessions as a forum to re-lecture to students who missed class.

Top Ten Positive Outcomes and Benefits of Supplemental Instruction:

- Students earn higher subject grades while they learn effective study skills.
- SI provides an opportunity for students to develop relationships with other students and staff, an important factor in retention.
- SI places the responsibility of learning with the students.
- SI helps to develop self-confidence and independence in students.
- SI is proactive and participatory rather than reactive and passive.
- SI provides collaborative learning experiences which promote assimilation into the campus culture.
- SI improves communication skills.
- SI accommodates various learning styles.
- SI provides students with group work experiences.
- SI enjoys a non-remedial image while offering academic support to all students enrolled in historically difficult subjects.

Faculty Member Involvement and Cooperation

SI is not intended to create additional work for faculty. The professor can support SI by:

- granting time for occasional in-class announcements,
- assisting the FITW CO-PI SI Program Manager in selecting and approving candidates for SI leaders for the subject,
- and providing the FITW CO-PI Data Manager with consented participant exam grades.

Supplemental Instruction Leader Line of Communication

The SI leader should report to the CO-PI SI Program Manager for the following:

- Hiring and related paperwork • Payroll • Training • Planning sessions
- Handling difficult students • Absence • Group attendance • Resources • Facilities issues

The SI leader should report to the faculty member for the following:

- Course syllabus • Textbook information • Instructor goals/expectations • Blackboard access (if applicable) • Questions about class material • Planning sessions

- The information in this handbook is developed from materials provided by the University of Missouri-Kansas City and is adapted from Monmouth University SI Faculty Handbook.

Contact Information Regarding Research Study

If you have questions regarding this study, you may contact the Principal Investigator, Dr. Patricia Spaniol-Mathews, at (361) 825-3163 or Patricia.Spaniol-Mathews@tamucc.edu. You can also visit her office located in the Classroom West building in office #121A. In addition, you may visit the FITW STEM-OSIP website at <http://fitw.tamucc.edu/> to obtain more information about the research project.

This research study has been reviewed by the Research Compliance Office and/or the Institutional Review Board at Texas A&M University-Corpus Christi. For research-related problems or questions regarding your rights as a research participant, you can contact Caroline Lutz, Research Compliance Officer, at (361) 825-2497 or caroline.lutz@tamucc.edu.

Supplemental Instruction Contact Information

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Faculty Agreement

The faculty member agrees to the following:

1. The Principle Investigator and/or Co-Principle Investigators will present FITW STEM-OSIP research information to your classes.
2. SI leader will attend class as often as possible. In addition, the Co-PI SI Program Manager might also attend some class sessions with the SI leader at the beginning of the term.
3. SI leader will occasionally be given a few minutes at the beginning of class to make announcements about the SI program.
4. SI leader and faculty member will meet on a regular basis.
5. Faculty member is encouraged to share feedback in regards to the SI program and SI leaders in an email or verbally.
6. Weekly oversight of SI leaders' online live WebEx sessions (80 hours per course each semester).
7. The faculty member will also provide to the CO-PI SI Data Program Manager:
 - Student exam dates and grades.
 - Final course grade.
 - Provide grading scale for each course.
 - **Please note that no supplemental pay will be released without the faculty member delivering the items in this section to the Co-PI SI Data Program Manager.**
8. Faculty will complete CITI Social and Behavioral Research-Basic/Refresher Course prior to the semester.

***By signing this document you are acknowledging that you have been trained on the First in the World STEM-OSIP research project and understand that all questions about the research must be referred to the Principle Investigator, Dr. Patricia Spaniol-Mathews.**

Faculty Member Signature

Date