

## 1 Instructor

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*Or by appointment*

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## 2 Introduction

Missions Computing—Senior Project (just *Missions Computing* in the remainder of this document) is a course primarily intended for students in Computer Science and Engineering who wish to engage in service-learning activities—particularly software development—with a partner in the international missions community.

- Admission to the course is by instructor permission.
- This course carries Cross Cultural (CC) and Speaking (SP) credit.

## 3 Objectives

The Missions Computing course engages you directly in missions computing in an international context where missions computing systems are created or used (or both). In particular, you will:

1. Apply your understanding of computer science and expertise in software development by contributing to the design, construction, enhancement, testing, deployment, documentation, or support of software employed directly by a missions partner.
2. Travel internationally to a missions partner location at which software and systems are developed, supported, or deployed in direct support of missions operations.
3. Experience the mission partner's organization through engagement with missions staff and families in service, fellowship, prayer, and worship. One goal of this experience is to “demystify” missions service, letting you see that your knowledge, abilities, and skills can be employed directly in service to the gospel.

4. Engage the local culture of the missions partner through service, evangelism, and mentoring under the leadership of the missions partner.
5. Understand how God superintends the advancement of computing and related technology, making it available to Christian technologists to obey the Great Commission and Great Commandments.
6. See firsthand how software and systems impact and enable the work of the missions partner both in the office and in the field.
7. Understand the need throughout the missions community for financial and human resources in support of computing and related needs.

## 4 Content

The course comprises the following key elements.

### 4.1 Course Preparation

Because the travel component of the course qualifies as a mission trip (more than 50% of course activities are directly related to missions service), you are eligible to raise tax-deductible support through Taylor University. You are required to contact supporters who are willing to provide prayer or financial support for the trip. In addition, you will:

1. Participate in team organization and information meetings facilitated by the team leaders.
2. Read and study technical material relevant to the missions computing project as directed by the team leaders.

### 4.2 International Experience

The majority of the course consists of international experience serving with a missions partner. During this time, you will:

1. Learn about the missions partner through orientation presentations, discussion, and activities, usually facilitated by staff at the missions partner.
2. Acclimate to the community in which you will serve by various means, including home stays with mission staff, worship services, community engagement, and other activities.
3. Develop relationships with missions staff through shared service on team projects and through participation in normal partner activities such as team devotions, Bible study, corporate prayer, and the like.

4. Receive training on the software and systems with which you will be working while in country with the missions partner. Typical topics include software engineering practice and process, languages and frameworks, logical modeling, revision control, issue tracking, continuous integration, and so forth.
5. Design, develop, enhance, repair, or extend software systems at the direction of the technical leadership at the mission. This activity constitutes a considerable fraction of your time at the mission partner (typically “full time” work hours most days).
6. Enjoy and appreciate cultural, social, and ethnic diversity through travel, dining, sightseeing, and similar activities.
7. Reflect on your travel and service through introspection, discussion, and required journaling.

### 4.3 Course Wrap-Up

By the last day of the term, you will:

1. Complete, clean up, and submit your journal (Section 5.1).
2. Write and submit your final experience paper (Section 5.2).

Upon return to campus, you will:

1. Present your poster (Section 6).
2. Attend and participate in any final debriefing meetings, team celebration, campus presentation, etc.

## 5 Deliverables

You must submit the following deliverables on the last day of the course.

### 5.1 Journal

The journal is a daily written record of your experience throughout the course, including the time before, during, and after international travel and service. You are expected to make at least one entry per day, but are welcome to make more than one. Each is to be tagged with the date and location at which the entry was made. These entries will be read and evaluated by the instructor, but will not be shared with other team members unless you authorize or encourage it. Over the duration of the course, your journal should include (but is not limited to):

1. Motivations for participation in the course

2. Expectations for the course prior to departure, including open questions that you hope to explore and answer during the course
3. Travel experience (to, from, and in the field)
4. Experience serving with the missions partner from technical, personal, social, and spiritual perspectives
5. Observations and insights into the culture(s) served during the trip
6. Changes in your view of culture, economics, government, technology, relationships, missions, theology, and spirituality (both in the international culture and at home)
7. Answers or insights into the questions you hoped to address during the course
8. Ways in which the experience altered, clarified, or informed your vocational calling as a computer scientist seeking to serve Jesus
9. Aspects of the course that were important, meaningful, or just plain fun
10. Suggestions as to how the course could be improved in the future

## 5.2 Final Experience Paper

You will write a paper about your personal experience during the course. The goal of this paper is to reflect on your own experience in the course and how you matured as a computer scientist and as a Christian. Your paper should address at least the following questions.

1. What stood out to you as unexpected or otherwise significant with regard to your perception of a culture other than your own?
2. What insights did you gain regarding missions service in general?
3. What did you learn about yourself as it relates specifically to serving as a member of a missions computing team?
4. What were the most important knowledge and skills you acquired as it relates to your future as a computer scientist?
5. How did your experience speak to your vocational call as a Christ follower?

These questions are not intended to be exhaustive. You are encouraged to reflect in your paper on any additional insights you gleaned from your experience.

Type your paper. Please double space. Use good spelling, grammar, punctuation, and structure. Your paper should be 1,250 to 1,500 words long. Print your paper and submit it to the course web site.

## 6 Presentations and Poster

This course carries SP (speaking) credit. Consequently, you will make two presentations.

First, you will present the results of your project work to our missions partner. In most cases, this will be a group presentation. If the project involved multiple teams, each will present on its own work.

Second, you will prepare a poster that captures the work you did on the project, and you will present the poster to the scholarly community at Taylor. As with the presentation to our missions partner, the poster may be prepared and presented as a team (perhaps multiple teams). The poster presentation will be scheduled on campus early in the semester following the overseas experience.

## 7 Participation

Barring sickness or injury, you are expected to attend all the meetings, activities, and team project work throughout the course (before, during, and after international travel).

## 8 Evaluation

Refer to my Periodic Table of the Grades (on Moodle) for my standard grading scheme. I reserve the right to award a higher grade than strictly earned; outstanding contributions, leadership, and participation figure prominently in such decisions. Course criteria contribute to your grade according to the following table.

Criterion	Weight
Teamwork and participation	10%
Mature, Christlike behavior	10%
Project contributions	30%
Journal	10%
Final experience paper	10%
Customer Presentation	15%
Poster/Presentation	15%
	100%