

# Business Requirements Specification

## 1. Introduction

### 1.1 Purpose -

The ambassadors are a group of students who volunteer for the U.A. Whitaker College of Engineering (WCE). The primary responsibilities for an ambassador are to attend outreach events and to promote the WCE. The ambassadors are in charge of advertising the engineering program and informing prospective students of the perks of being an engineering student at FGCU. Ambassadors collaborate with the Outreach Specialist to create lessons and activities to take to local schools that demonstrate engineering concepts. The system will allow the outreach specialist a better system of time and resource management to create an effective outreach program.

### 1.2 Scope -

FGCU emphasizes innovative, student-centered teaching and learning, promotes and practices environmental sustainability, embraces diversity, nurtures community partnerships, values public service, encourages civic responsibility, and cultivates habits of lifelong learning and the discovery of new knowledge. Ambassadors are used to produce engineering and construction leaders in selected disciplines with strong technical competence and professional skills to meet the challenges of Southwest Florida and beyond. As such, the system will increase the EAP's ability to create outreach events.

### 1.3 Overview -

The WCE is located in Holmes Hall, a building that was specifically designed for student-centered teaching of engineering and computing courses in an active and collaborative learning environment. The college has 30 faculty and staff and over 976 students. They offer undergraduate degree programs in bioengineering, civil engineering, environmental engineering and software engineering (as well as an undergraduate degree in computer science for students who were on campus before fall 2011). This building is home to the Engineering Ambassador program which encourages students to participate in community outreach activities and encourage prospective students to pursue engineering from ages K-12<sup>th</sup> grade.

### 1.4 Definitions -

WCE- Whitaker College of Engineering

FGCU-Florida Gulf Coast University

EAP – Engineering Ambassadors Program

OS - Outreach Specialist

ITS - Information Technology Services

SOP - Standard Operating Procedures

## 2. Sources -

<https://www.fgcu.edu/about/>

<https://www.fgcu.edu/eng/about/>

Julie Rose, Outreach Specialist at FGCU

## 3. The Business

### 3.1 Major Stakeholders

A stakeholder is an "Individual or organization having a right, share, claim, or interest in a system or in its possession of characteristics that meet their needs and expectations"

Stakeholders include the university, the WCE, students, members of the surrounding community and anyone who derives a benefit through interaction with the WCE and its Ambassador program.

Donors, general community, college specific donors, prospective students, parents currently enrolled students.

### 3.2 The Business Environment

The WCE is part of FGCU which is a public university and is therefore owned by the State University System of Florida. The university's current president is Dr. Mike Martin who took over for the previous President Bradshaw on July 1st, 2017. As a government-funded

institution, FGCU and the WCE are bound by state laws and the budget given to them by the State University System. Internal factors that may affect the EAP may include budget cuts, although Ambassadors receive service hours as payment so any funding cutbacks should not effect the system, except in the case of the removal of the outreach specialist.

### 3.3 The Business Mission, Goals, and Objectives

U.A. Whitaker College of Engineering (WCE) works with schools and organizations to expose students to engineering careers and opportunities. Through summer camps, events, school visits, and targeted recruiting for the WCE VIP Program, prospective engineering students are able to experience the problem solving, critical thinking, and creativity of engineering programs at FGCU. The new system will optimize and streamline the organizational and planning side of the EAP allowing for more time to be dedicated to outreach events, as well as freeing up the time of the outreach specialist to reach further into Florida's communities.

### 3.4 The Business Model

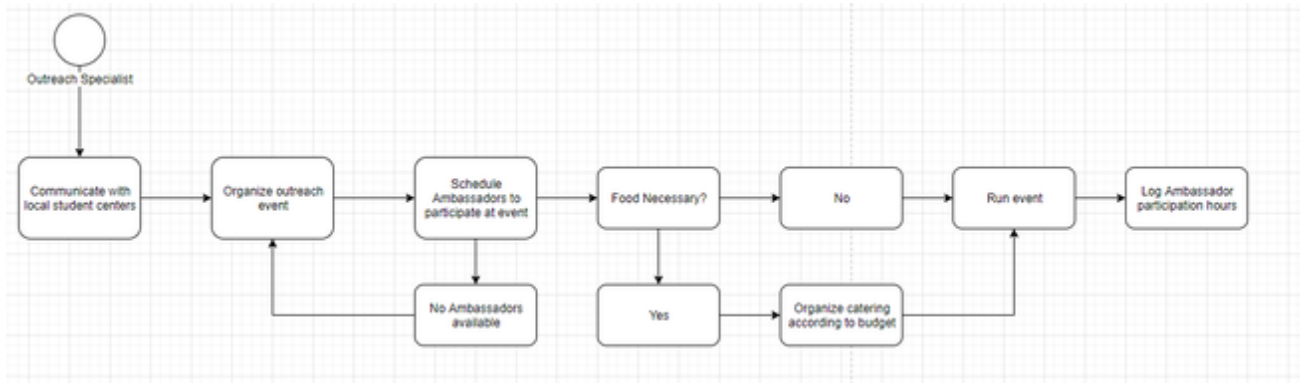
The mission of the WCE and the EAP is to produce engineering and construction leaders in selected disciplines with strong technical competence and professional skills to meet the challenges of Southwest Florida and beyond. The EAP plays a pivotal role in supporting the outreach specialist who draws in potential students with engaging community events and activities tailored to draw prospective students into the WCE at FGCU. Without the EAP and the outreach specialist, the influx of new students to the WCE would decrease, potentially causing funding from the State System to lower. The system will promote an increased amount of community events, restrained only by the budget given to the outreach specialist by making the organization and planning process far simpler.

### 3.5 The Information Environment

The WCE is made up of students, professors, academic advising and several other priority groups. The system and it's resulting database shall be accessible by the outreach specialist and those deemed to require access based on the decision of the outreach specialist and or his or her superiors.

## 4. Business Operational Requirements

### • 4.1 Business processes -



### • 4.2 Business Operational Policies and Rules -

The WCE Engineering Ambassador Program run by the Outreach Specialist is responsible for communicating the benefits of joining the engineering program at Florida Gulf Coast University to the surrounding communities.

The Outreach Specialist is responsible for organizing and carrying out successful, engaging community events which showcase the many benefits of the WCE while also staying within the operating budget provided by the WCE.

The responsibilities of each individual Ambassador entails a minimum of 10 WCE service hours each semester for non-graduating students, and 20 hours for those who are graduating in the current year. Ambassadors are responsible for reporting their hours to the Outreach Specialist who is responsible for keeping track of said service hours and approving them through Eagle Career Link, FGCU's time management website.

#### Equipment Policy:

Equipment (audio-visual, tables, chairs, easels, flags, etc.) will be placed in reserved spaces at the request of the individual or group reserving the space. Equipment will remain in the reserved space for the duration of the event and shall not be removed

or transported from University property.

ALL event rental equipment, i.e. tents, chairs, tables, linens, foliage, staged, lighting, etc, MUST be coordinated through Campus Reservations. Should rented equipment arrive to any University facility that has not been coordinated through Campus Reservations, Campus Reservations reserves the right to turn the item(s) away. Equipment that is rented and not removed IMMEDIATELY following the event will result in additional charges for the removal of the said equipment. Unauthorized rental equipment can result in scheduling privileges being revoked.

#### **Evacuation Procedures:**

In the case of an evacuation, individuals are to comply with the facility manager or University Police representative at all times. Facility users will be notified of an emergency or threat to safety by alarm, the building staff or University Police. If necessary, the facilities will be evacuated in a calm and orderly fashion. In case of evacuation, all persons are to remain outside the building until they are instructed to return by the building staff or University Police. Use the stairs, not the elevator, in evacuation circumstances.

#### **FOOD SERVICE AT EVENTS:**

All FGCU events that serve food must comply with the Florida Administrative Code (FAC) 64E-11, 61C-4.016, 61C-1 and all applicable regulations.

#### **• 4.3 Business Operational Constraints -**

To display effective time management and ensure all processes and materials necessary are available to be utilized at an event, the client must have a small scale event approved and organized with the Outreach Coordinator 24 hours in advance, while a larger event requires a minimum of three days notice. In addition, a list of required materials must be submitted to the Outreach specialist to ensure that said materials are available to be utilized at the scheduled event. To prevent any misunderstandings, it is recommended the list be submitted in an email to be retained for records.

The EAP and Outreach Specialist are largely restricted by the lack of an internal tracking system for supplies and participation. All events must have a minimum amount of ambassadors and or volunteers with the appropriate supplies available.

#### **• 4.4 Business Operational Modes -**

While the university is in SOP, the EAP and Outreach Specialist will function normally, participating or organizing any events as they come. Should an unexpectedly high amount of events be requested by citizens in the surrounding communities, the Outreach Specialist reserves the right to cancel or delay an event by any period of time necessary to provide a satisfactory experience to those students and chaperones that shall be in attendance.

In the event that the school is closed, a hurricane or other natural disaster, the Engineering Ambassadors shall follow FGCU's standard operational procedures. For example, if the institution is closed, then any events scheduled for that day representing the university in the local area shall also be canceled and or rescheduled.

#### **• 4.5 Business Operational Quality -**

Florida Gulf Coast University is a 15,000 student university with a small-school vibe. The school's deep connections to the community such as Estero and Naples provide for a chance to establish high value donors. The WCE, being one of the more prestigious colleges on campus, allows the spotlight to shine on the engineering students and the projects they work on. By providing excellent community outreach events, the university has created a symbiotic relationship with the surrounding areas, and continuing this relationship is a top priority as it provides much needed funds for the school as well as inspiring new people to enroll at the university. In the long term, these people will exit the university with a degree and continue to help their community.

#### **• 4.6 Business Structure -**

As a public university, FGCU relies primarily on funding from the state of Florida and donors who support the school. The university is divided into six main colleges: The Lutgert College of Business, the College of Arts and Sciences, the College of Education, the U.A Whitaker College of Engineering, the Marieb College of Health and Human Services, and the Honors College. There are also smaller schools like the Bower School of Music and the Arts that are a part of the university as well. Within the WCE, there are departments for software engineering, bio-engineering, civil engineering, environmental engineering, construction management, and masters of engineering as well the advising and Dean's offices'.

### **5. Preliminary Operational Concept of Proposed System**

#### **• 5.1 Preliminary Operational Concept -**

- a) The system shall ensure outreach events are scheduled efficiently and do not overstep the capabilities of the Outreach Specialist. It is necessary for the system to be accessible by any users the Outreach Specialist deems necessary. The system must also be able to function offline and then update to a main database for other users to access once reconnected to the network.
- b) The system shall be a desktop application able to connect to FGCU's network. The system shall use this connection to update the list of upcoming events on the school's website every other day so that whoever is interested in events will have ample time to prepare for them. This system should also be able to have an effective data management system so that the Outreach Specialist can easily keep track of service hours per each Ambassador as well as assigning each Ambassador a unique key after their first entry into the system. The system shall also create notices for events with time conflicts but will not prevent the user from scheduling conflicting events to account for the possibility of another Outreach Specialist being hired in the future or an Ambassador event which does not require the OSs' supervision.
- c) The system shall have two modes: online and offline. The online system shall update FGCU's event calendar online every

other day, and if the system has been online for more than one day, the calendar will be updated with any new events scheduled as soon as the system returns to an online state. The online system shall update any service hours to the master database stored on the network as well as keeping a local backup. The offline system shall store all new information such as scheduled events and service hours to a secondary database that will be pushed to the master and local backups upon returning to an online status.

- d) Users in the system are to be the Outreach Specialist, his or her assistants, and any engineering administration involved in outreach or event coordination. All users will have equal permissions in the system, except for the Outreach Specialist and Administrators in the WCE who will also be able to add, edit and remove service hours. Users appointed by the Outreach specialist will have basic event editing permissions and time logging capabilities which must be approved by the OS.
  - e) The system will be supported and maintained by the FGCU ITS department and will have regular maintenance and backups every month to ensure the reliability of the system.
- **5.2 Preliminary Operational Scenarios -**

Describe examples of how users/operators/maintainers will interact with the system in important contexts of use. The high-level scenarios are described for an activity or a series of activities of business processes supported by the system. The scenarios should be uniquely named and numbered and should be referenced in the description of the business processes in 9.3.9.

#### **5.2.1 Outreach Specialist, Administrator or Assistant adds an event:**

When adding an event, the user will log into their account and navigate to the "Schedule an Event" page. The user will then input the date, time, location, event title, and a description into the corresponding fields. After submitting the event, it will be stored into the local database and pushed to the master database as well as updating the FGCU calendar every other day with any new events.

#### **5.2.2 Outreach Specialist or Administrator add, remove or edit an event:**

When editing an event, the user will navigate to the "Upcoming Events" page, click the "Edit" icon which will pull up the event creation screen with the fields populated with the current data, allow the user to edit the fields, finalize the changes, and re-create the event or delete it.

#### **5.2.3 Outreach Specialist, Assistant or Administrator add, remove or edit Ambassador service hours:**

To edit, add or remove service hours, the user will navigate to the "Ambassador Hours" page which will display a list of all active Ambassadors as well as providing the option to create a new Ambassador. The user will then select an ambassador to display a list of their events participated in and the option to "Add Hours." The total number of hours per semester shall be displayed by each Ambassador's name. After selecting "Add Hours," the user will be prompted to fill in the event name and date as well as how many hours were donated by the Ambassador. This number will be added to the cumulative number of hours per semester displayed by an Ambassador's name. Any hours inputted by an Assistant account will require verification by the Outreach Specialist before approval. Approval will be requested via email alerting the OS that there are hours to be approved.

- **6. Other Preliminary Life-Cycle Concepts**

#### **6.1 Preliminary Acquisition Concept -**

The system shall be acquired through a team of software engineering students at the university looking for service hours for both the school and the Engineering Ambassadors Program. The students will use the resources available to him/her such as professors, classmates, and their own knowledge as well as assistance from ITS to link the program to FGCU's calendar. Each student will be awarded the hours they have put into the project as service hours towards their graduation requirement and the EAP if applicable. The students will coordinate with the OS to ensure the project stays on track and is acceptable to the OS's standards.

#### **6.2 Preliminary Deployment Concept -**

The system shall be delivered via a download from Github. A student who has worked on developing the project and is intimately familiar with downloading executables from Github and testing for functionality will be responsible for installing the program on any user's computer where it is necessary as well as providing a brief walk through of how the program works. The system shall be relatively simple with well labeled tabs and buttons to make the process as easy as possible. After the system is installed, the OS, Assistants, and Administrators will be required to input any information they deem necessary, such as current Ambassadors, after the student has created their accounts with the appropriate permissions. After the initial setup the system will be ready to be utilized at the users discretion.

#### **6.3 Preliminary Support Concept -**

The system will at most be used for five to six people and therefore will not be overly complex. After working with ITS at FGCU to develop the system, the students will hand over maintenance of the product to ITS. Each page and error notice will have the phone number and email address for ITS should assistance with the product become necessary. Should major intervention with the system become necessary, ITS will contact the students who created the system for advice and assistance when proceeding with a fix.

#### **6.4 Preliminary Retirement Concept -**

Should it become necessary to retire the system, a new temporary or permanent solution should be in place before the current system is removed. To remove the system, it may simply be deleted from all devices along with any pertinent or important data that must be kept secure. Although, the system is meant primarily to record events and service hours for the EAP so there should not be any information that has a high priority to stay secure.

- **7. Project Constraints**

The Outreach Specialist may only provide service learning hours that will also count as required hours as a member of the

Engineering Ambassadors as a form of payment. The team must provide sufficient documentation to make the purpose of the code clear to ITS members who have not worked on the project before to ensure the longevity of the system in case of a problem that requires editing of the source code. Additionally the project must be completed by April 1 of Spring Semester 2020. The system must be able to integrate successfully with the university's website and comply with any internet usage restrictions and guidelines set forth by FGCU.

- **8. Appendix**

- **8.1 Acronyms and abbreviations**

WCE (Whitaker College of Engineering) - 1.1, 1.3, 1.4, 3.1, 3.2, 3.3, 3.4, 3.4, 4.2, 4.5, 4.6, 5.1

FGCU (Florida Gulf Coast University) - 1.1, 1.2, 1.4, 2, 3.2, 3.3, 3.4, 4.2, 4.4, 4.6, 5.1, 5.2.1, 6.1, 6.3, 7

EAP (Engineering Ambassadors Program) - 1.2, 1.4, 3.2, 3.3, 3.4, 4.3, 4.4, 6.1, 6.4

ITS (Information Technology Services) - 1.4, 5.1, 6.1, 6.3, 7

OS (Outreach Specialist) - 1.4, 5.1, 5.2.3, 6.1, 6.2

SOP (Standard Operating Procedures) - 1.4, 4.4