**EE Senior Design**

**Project Statement of Work**

**Course Front End Scheduler**

**Texas State University**

**Ingram School of Engineering**

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**September 24, 2018**

|  |  |  |  |
| --- | --- | --- | --- |
| **Revision History** | | | |
| **Version** | **Date** | **Description** | **Author** |
| .1 | 09/11/2018 | Began initial distribution of sections | ALL |
| .2 | 09/12/2018 | Added Project and Product Scope | Phillip and David |
| .3 | 09/15/2018 | Added Executive Summary and Business Need | Kiana |
| .4 | 09/15/2018 | Cleaned up tables, removed remaining red text | David |

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# Kiana:

# Executive Summary

Our product is an intuitive, web-based application that allows University Program Coordinators to assign professors to courses and export this data as an XML file. Currently, Program Coordinators use an outdated, hard-to-navigate Excel Spreadsheet to assign professors to courses. This method is inefficient, as it causes users to spend more time figuring out where features and data are located, rather than simply completing the task. Our product will benefit the sponsor by having a user-friendly, easy-to-navigate interface that provides a clear guidance on the process of professor-course assignment. By integrating the XML export feature into our product, Program Coordinators will be able to easily import this data into UniTime, a Class-Scheduling open-source software. Our product development team consists of three Undergraduate EE/CE students who are advised by a Sponsoring Faculty Member and two Student Mentors. We will be designing and developing the front end and back end of this web-based application using various programming languages and technologies. The project work will take place on and around Texas State University, San Marcos Campus. Our product will be ready in May 2019.

Kiana:

# Business Need

Ingram Engineering Program Coordinators need a means to assign professors to courses in an easy-to-access, intuitive and reliable way. The existing method uses an Excel Spreadsheet that lacks the functionality to be accessed as the most current version across all involved parties. The spreadsheet is also difficult to understand by new users and can be easily lost as it exists solely on the hard drive of a computer. By developing a web application, users that have access will be able to view the most up to date assignments by simply logging-in to the system. This method also solves the problem of reliability by using a database server to host professor and course data off client. Our product will be designed to be easily handled by both existing and new users and present an intuitive process of professor-course assignment.

Phillip:

# Product Scope Description

|  |  |
| --- | --- |
| **Features** | ***Description*** |
| Homepage Component | The Homepage Component will act as a landing area for the application and provide a base for navigating through the software. It is accessed through a web browser. |
| Professor Management Component | The Professor Management Component will enable the user to add or remove professors and to edit their available courses. |
| Course Management Component | The Course Management Component will enable the user to add or remove a requisite list of courses. |
| Indications Component | The software will provide indications that will assist the user in assigning courses to the correct professors. For example: a notification might tell the user that a professor has already reached the max number of courses. |
| UniTime Export Component | The UniTime Export Component will allow the user to export the software data into an XML format that is ready to be processed by UniTime |
| Product Usage Documentation | Product Usage Documentation will be written to provide the user with explanations on how to use the functions of the software. |
| Database Service | A database server will be provided so that professor and course data can be hosted and accessed off client. |
| Texas State Log-In System | The College of Science and Engineering’s cose.txstate.edu domain will be used with their login system to restrict access to authorized individuals. |

David, and Kiana:

# Project Scope Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Schedule** | | | | |
| **Task** | **DRI** | **Duration, Wks** | **Start** | **End** |
| Functional Specification | Kiana | 4 | 09/24/2018 | 10/15/2018 |
| Use UML to design program | David | 3 | 09/19/2018 | 10/10/2018 |
| Select programming platform | Phillip | 2 | 09/19/2018 | 10/03/2018 |
| Initial Design Review | Kiana | 2 | 10/08/2018 | 10/22/2018 |
| Updated Specification | Kiana | 2 | 10/22/2018 | 11/05/2108 |
| Configure web platform | Phillip | 3 | 10/03/2018 | 10/24/2018 |
| Design basic instructor object | David | 2 | 10/10/2018 | 10/24/2018 |
| Design basic course object | David | 2 | 10/10/2018 | 10/24/2018 |
| Design interface for both | Phillip | 2 | 10/10/2018 | 10/24/2018 |
| Design “browsing” system | Kiana | 2 | 10/10/2018 | 10/24/2018 |
| Labor-Cost-Schedule | Kiana | 2 | 11/05/2018 | 11/19/2018 |
| Design XML information output | Kiana | 2 | 10/17/2018 | 10/31/2018 |
| Design notification/alert system | David | 2 | 10/17/2018 | 10/31/2018 |
| Design user interface (GUI) | Phillip | 2 | 10/17/2018 | 10/31/2018 |
| Implement Course and Instructor System | David | 3 | 10/31/2018 | 11/21/2018 |
| Implement Browsing system | Kiana | 3 | 10/31/2018 | 11/21/2018 |
| Implement Database | Phillip | 3 | 10/31/2018 | 11/21/2018 |
| Implement GUI and program on web platform | Phillip | 3 | 10/31/2018 | 11/21/2018 |
| Design Poster | Kiana | 2 | 11/12/2018 | 11/14/2018 |
| Test Plan | David | 3 | 11/26/2018 | 12/07/2018 |
| SD Day presentation | Kiana | 3 | 11/26/2018 | 12/07/2018 |
| Begin testing inputs | David | 3 | 01/22/2019 | 02/12/2019 |
| Begin testing output XML | Kiana | 3 | 01/22/2019 | 02/12/2019 |
| Edit program/GUI as needed | Phillip | 3 | 01/22/2019 | 02/12/2019 |
| STRETCH: Implement algorithm to automatically assign courses | David | - | - | - |

David:

# Sponsor Support Elements

|  |  |  |
| --- | --- | --- |
| **Sponsor Support Elements** | | |
| **Element** | **First Needed** | **Needed Until** |
| Sponsor's Technical Advisor, at least 1 hour/week | 9/21/15 | 5/4/16 |
| Alpha/Beta Testing of the software | 11/28/2018 | 5/4/16 |
| Server to host software | 11/21/2018 | (N/A) |

# 

# Approvals

The signatures of the people below indicate an understanding in the purpose and content of this document by those signing it. By signing this document you indicate that you approve of the proposed project outlined in this Statement of Work and that the next steps may be taken to create a Functional Specification and proceed with the project.

|  |  |  |  |
| --- | --- | --- | --- |
| **Approver Name** | **Title** | **Signature** | **Date** |
|  | Project Manager |  |  |
|  | D2 Project Manager |  |  |
|  | Faculty Sponsor |  |  |
|  | Sponsor |  |  |
|  | Instructor |  |  |

**CHECKLIST for Statement of Work**

The Statement of Work is graded by your Lab Section Instructor. Grades are individual and NOT team.

Use this as a checklist before submitting your SOW. Comply with each item on this list to maximize your grade.

**Elements**:

1. **Title Page done correctly** □
   * Logos properly handled
2. **All instructions (red) deleted** □
3. **Written contributions of each team member clearly identified** □
4. **Table of Contents is correct**
   * Section numbers retained
   * Page numbers correct
   * No tries other than the 6 specified
5. **Executive Summary is clear and concise**
   * 1/2 to 3/4 of a page - no more
   * Outlines what you will produce
   * All bullet items on the template are addressed
6. **Business Need is short and concise**
   * Clearly states the value of this project
   * 1/2 a page or less
7. **Product Scope describes the product** (what you'll produce)

* **KEY:** You thoroughly researched what your project entails
* Key features and characteristics of what you'll design are listed
* A table or bulletized list is used to describe the features
* The performance is described
* How the product meets the business needs
* The section speaks only to what you'll produce
* Course documents are NOT listed
* You will have worked with your D2 Team, and your Sponsor and Faculty Sponsor

1. **Project Scope describes how you will do the project** □

* A table is used to describe the major tasks needed to finish the project
* They are scheduled in a way that makes sense
* Each task has a Duration, Start, and End Date
* The second semester is included
* You show when parts or software is ordered
* You show when a prototype will be ready for testing
* You show realization that the project must be done (ready to test) before the Characterization Report is due
* You will have worked with your D2 Team, and your Sponsor and Faculty Sponsor

1. **Sponsor Support Elements are complete and reasonable**

* You thought about what you'd need from the Sponsor and listed each item
* The items were general categories
  + Need specific microprocessor board - good
  + Need 10 ohm resistor - not good, too detailed
* It is clear to the Sponsor exactly what is expected of them

1. **All signatures were present before submitting the SOW** □
   * You worked with your Sponsor in a timely fashion
   * You gave them plenty of time to review the SOW
   * Signatures were written, i.e., not typed in