CIS 492
Senior Project
Fall 2019

INDIANA WESLEYAN UNIVERSITY

Facilitator:	**Dr. Joe Hoffert**	**joe.hoffert@indwes.edu**
Credits:	**2**	
Class Times:	**TTh**	**OHSN-182 8:20 - 9:15**
Office & Phone:	**OHSN-170C**	**765-677-2292**

Course Philosophy:

Education is not about the filling of a bucket but the lighting of a fire! --William Butler Yeats

Who questions much, shall learn much, and retain much. --Francis Bacon

Good judgment comes from experience, and experience comes from bad judgment. --Frederick P. Brooks

Own your education. --Joe Hoffert

*It is our duty and joy at **all times** and in **all places** to give You thanks and praise, Holy Father, heavenly King, Almighty and eternal God.* -- The Liturgy of the Church of Nigeria (Anglican Communion)

[Sharing an Adventure](#)

[Educational Paradigm](#)

[Yet Another Educational Paradigm](#)

[Still Another Educational Paradigm](#)

Prerequisites

- CIS 482

I. Course Description

A capstone course in which the student will study, research, design, program, verify, and document a special computing project assignment selected in consultation with the instructor. The student will work independently under the guidance of a supervisor familiar with the needs of the project. Each student will be required to make at least one oral presentation. Prerequisite: CIS 482

II. Course Objectives

After completing this course, the students are expected to have:

- Demonstrated professional communications skills by being able to interact effectively with clients;
- Demonstrated a working knowledge of the subject domain by effectively researching the client's needs for the proposed software;
- Applied principles of project management to a client project; and
- Demonstrated technical writing skills by producing documentation of the system as developed, including supplemental materials as required (*e.g.*, reference manuals, training aids, etc.).

III. Required Text and Materials

Required Text: None

IV. Grade Distribution

		Grading Scale
Weekly Hours & Unplugging	60 pts	A: 94 – 100%
2-Week Build Cycles (5)	400 pts	A-: 90 – 93%
Department Field Trip	20 pts	B+: 87 – 89%
Senior Survey	20 pts	B: 83% – 86%
Division Colloquium Presentation	100 pts	B-: 80 – 82%
Final Presentation/Demo/Document & Video	400 pts	C+: 77 – 79%
	_____	C: 73 – 76%
Total	1000 pts	C-*: 70 – 72%
		D+*: 67 – 69%
		D*: 63 – 66%

* = While a C-, D+, or D will give a student college credit at IWU it does not meet the departmental policy for competency.

Note: All submissions should be made via Brightspace. If there are problems submitting via Brightspace then, as a backup mechanism, send the instructor an email with the submitted materials attached at the deadline time.

V. Description of Assessments

A. **Weekly Hours & Unplugging:** At the end of each week (*i.e.*, by Saturday 11:59 p.m.), students are to submit the number of hours they spent on this course outside of class time. The expected minimum time expected for this course is 6 hours/week. This time can be averaged over the 2-week build cycle when applicable. This reporting is worth 4 points per week.

Note the following items for your report:

1) *If you are working in a group*, add a sentence or two evaluation for each member in your group.
2) *If you are a CIS major*, before October 1 you need to meet with a faculty member from the department related to your track (*i.e.*, business, communications, or art) to inform them of the project (as well as requesting their attendance for the final project). Include a summary of the conversation, the name of the faculty member with whom you met, the date you met, and the time you met. You only need to include this information about your meeting one time during the semester.

In addition, students are to spend either:

- a continuous 60 minute period each week disconnected from electronic equipment (e.g., phones, computers, TVs, radios)

   OR

- one 24-hour period during the semester.

The option selected is left to the student. Include in the reporting of your weekly hours a 2 to 3 sentence reflection on this unplugging time (*e.g.*, what your thoughts were, the difficulty/ease of being unplugged, your reaction to the 60 minute time period) or one full page single-spaced reflection for the 24 hour unplugging.

B. **2-Week Build Cycles:** At the end of each 2-week period, students' projects will be subjected to system test as described in the 2-week build cycle outline.

C.   <u>**BAE Systems Field Trip:**</u> The CIS department is planning a field trip (tentatively Thursday, Oct. 24) to BAE Systems in Ft. Wayne. Students are expected to attend this field trip.

D.   <u>**Senior Survey:**</u> Towards the end of the semester students are expected to fill out a short survey of their experiences as a CS/CIS major while at IWU.

E.   <u>**Division Colloquium (or Ft. Wayne Tech Meetup) Presentation:**</u> During the course of the semester each student will need to present their current work at a division colloquium (or Ft. Wayne Tech Meetup). The presentation needs to be 25 minutes with 5 minutes leftover for questions (more time is required for groups of students as outlined below) in preparation for the final presentation at the end of the semester and should follow item 1 of the outline presented below for the final presentation. A demonstration of the current work needs to be included as well. For students working together on a project, alternate durations for presentations will be negotiated.

The student needs to schedule a day and time with Dr. McCullough for a colloquium presentation (or Adam Hawkins: <u>ahawkins@indigital.net</u> for an INdigital presentation). It is suggested that the student pick a presentation day towards the middle of the semester. This timing allows for some project work during the semester and incorporation of feedback from this presentation to shape the final presentation.

F.   <u>**Final Presentation/Demo, Documentation, & Video (all due Dec. 5):**</u> At the end of the project each project group will need to
- write user documentation for the project (*i.e.*, how the user will use the project) of at least 3 pages in length (excluding figures and references),
- make a 25 minute presentation (with numbered slides) and add 5 minutes for questions at the end, and
- develop a 3 minute video.
  (For each additional project member add 15 minutes for the presentation, 1 minute for the video, and 1 page of user documentation.)

These materials are to be submitted (or a clear reference included) through Brightspace as a single archive file with the last name(s) of the student(s) as part of the name of the file.

Your presentation needs to contain the following elements:
1. Description of the developed project and motivation for it including:
   - i.   Summary of requirements as elicited by interactions with the client; [5%]
   - ii.   Analysis and design of solution based on requirements; [5%]
   - iii.   Implementation of the solution based on analysis and design; Each student needs to describe detailed individual contributions toward a group project. [5%]

       iv.   Project management principles applied (e.g., development approach, use of configuration management system, automated testing, tracking of assigned functionality); [5%] and

       v.   Online documentation of the system (e.g., user manual, tutorials/examples) [5%]

       vi.   Live demonstration of the project you've developed illustrating the functionality as outlined above. Any information system developed must include front-end support for Create-Read-Update-Delete (CRUD) functionality. [50%]

2. Lessons learned from your project (e.g., what would you have done differently, what worked well, most interesting/easiest part of the project, hardest/most boring part of the project). [6.25%]

3. Description of how your faith commitment connects with your project (at least 1 minute discussion). [6.25%]

4. Courses that have been helpful in your project development along with at least a sentence of how the course has been helpful. [6.25%]

5. A video introducing the team members and demonstrating the functionality of the project. [6.25%]

6. *If you are a CIS major*, you need to coordinate the attendance of a professor in the field related to your track (i.e., a professor from the Business Department for the business track, a professor from the Communications Department for the communications track, a professor from the Art Department for the graphic design or Internet development tracks).

VII.   **Late work:** *Work turned in after the due date & time will receive a mark of 0 unless there are extenuating circumstances (e.g., death of a nuclear family member).* This policy is meant to help the students in regards to accountability.

VII.   **Syllabus content:** The professor reserves the right to make changes to this syllabus, if deemed necessary. All changes will be provided to the students orally or in writing before the implementation of the change.