



Fundamentals of Information Systems **Online Learning Environment Plan**

Thank you for allowing me to submit my initial plan My goal is to include all aspects of the TPACK model in the development of my project. I have provided detail on each area below.

Pedagogical considerations

Since this content will be online, it's critical that it be developed with a student-learning focus. The student will have directions for how to complete the lessons and assessments but it will be up to them to work independently to do so. Each lesson will have a list of learning objectives that will be accessed in the lesson assignments. It will be important the student reviews the content and masters it before they begin the assignments.

Universal Design for Learning will be implemented. Each week, the students will have a Chapter they can read from the textbook and a virtual lecture to go along with the chapter. This will allow those who are not strong readers to have an option to learn the content. The assessments will vary from discussions to quizzes to hands-on assignments. While the students are required to complete each assessment there will be opportunities for them to do well even if they struggle with one format of assessments.

The Quality Matters rubric will also be used for development of this content. I will not be able to meet all the standards since I am creating this as an assignment and will not be linking to college resources. The topics I will focus on include: making sure the overall design of the course is clear and the student knows where to begin, ensuring that the learning objectives are measurable and that all course materials, activities and assessments are developed to help meet the outcome of these objectives, grading policies are clearly stated, tools used in the course support active learning, course navigation is easy to use and the course meets accessibility requirements.

Content considerations

My Online Learning Environment Plan will focus on Computer Science. I have been tasked with the project of redesigning a course called Fundamentals of Information Systems. This project is to be completed for Spring 2020. I would like to focus on this course for this project. It will be of great help since I will then be able to upload

the content into the Blackboard LMS and use it as my starting point for development.

Background Information of Course:

The course description and course level learning objectives were set by the curriculum committee so I need to work in the framework of ensuring my content is aligned accordingly with them. I have also spoken to the Course Coordinator and have been provided with a list of items that the instructors are hoping the students achieve from completing the course. This adds another level of complexity as they are slightly different from the CLOs that were initially set for the course. I have detailed all of this information below for you to review.

The Course Description:

This course is designed to familiarize students with core information systems principles and practices. Topics include, but are not limited to, types of information systems, hardware and software, data modeling, database systems, internet technologies, systems development, careers, global and social impacts, and industry trends.

The Course Learning Objectives:

Upon successful completion of this course, students should be able to:

- Demonstrates advanced knowledge when using the Windows Operating System (GLO 1,2,3,4,5,6)
- Demonstrates advanced knowledge when working with Hardware and Software components (GLO 1,2,3,4,5,6)
- Demonstrates proficient knowledge of basic computer network environments (GLO 1,2,3,4,5,6)
- Demonstrates proficient knowledge of the impact technology has on people with disabilities, medical issues, etc. (GLO 1,2,3,4,5,6)

Instructor Goals for Course:

- Basic understanding of file organization
- Receive a foundation of programming logic
- Understand the planning and documentation process for creating a program
- Understand how to use Microsoft Office Products (Word, PowerPoint, Excel and Access work) and Google Products (Google Docs, Sheets and Slides)

Learner information:

The students who take this course range from CCP students in High School to Adult learners. Typically, this course is taken the first semester a student at the college. Many of these users have never had any experience in the Computer Science field so

it's important the weekly learning objectives are clear and aligned with both the content and assessments for the course.

Many of our students in Computer Science are Visual or Auditory learners so when developing content this has to be kept in mind. For each lesson, there will be a recorded presentation which will meet these learners needs. There will be closed captioning and text on the screen to assist those who have a Reading learning style, have a hearing impairment or are their mother tongue is not English. The ultimate goal is for all students to be able to learn from the content that is developed.

Course delivery format:

All instruction for this course will be online. There will be no class meetings so it's critical that everything is thoroughly explained.

Content for Development for my OLE:

For this course, I will be using the Computing Essentials 2019 textbook from McGraw-Hill Education. I will also be incorporating some additional content that I have developed or found YouTube since not everything that needs to be covered is in the textbook. I'm not a fan of the learning materials that the publisher has produced. Their PowerPoint slides were basic, the layout was not well done and they do not provide all the information that I wanted students to learn. I will use them as a reference when developing my content and cite them as a source where needed.

Since my students have multiple learning styles, my goal is to ensure I have content that meets this need. Each week there will be an overview of what they are to learn, a list of weekly learning objectives, assigned book readings, interactive lectures and multiple forms of assessment including discussion forums, hand-on homework and quizzes.

Since the content takes a while to develop, I would like to create the Introduction Content and Week 1 Lesson for my OLE. I feel this will give you a good understanding of my development skills and how the rest of the content will be formatted. My goal will be for each week to have the same types of materials and assessments. This will ensure the students quickly become comfortable will how the class is formatted and understand what to complete each week.

The Introduction content will include a course overview, instructor welcome, class policies, course level learning objectives, required software and technical skills for students, expectations, required book information, netiquette guidelines, a course calendar, accessibility and privacy policies for content and the rubric used for discussions. The assessment for this area will be a quiz.

The Week 1 lesson will include a lesson overview, the weekly learning objectives, presentations on the chapter 1 content, Chapter 1 of the book and a presentation on

file organization. Assessments for this area will include a discussion forum, hand-on activity and a review quiz.

Technology chosen to support learning and teaching and why. Briefly tell how this will support the chosen pedagogy and content.

For this project, I will incorporate several technologies. This will allow me to create a learning experience like my students will have in Blackboard. I would have liked to develop my content in Blackboard but we are not permitted to give Guest Access to courses therefore I will mimic the set-up using various tools which are listed below.

I will use a Google Site as my platform. The reason I choose a Google Site is it gives me the flexibility to design something that looks similar to the layout of the Blackboard LMS and allows me a place to house all my content. This tool is easy to navigate so my fellow classmates will have no trouble looking at the content I have developed. I will include a series of help videos in case they have questions.

For the materials, I will be using the following tools:

Presentations will be developed in Articulate Storyline. I have chosen this product because it's easy to use and allows me to create interactive slides. I plan on having a slide where the student clicks images to find out more, using recorded audio, videos and closed captions throughout the presentations.

Chapter One from the book will be a pdf file that students can download and read. I was not able to locate a version online so this will be scanned directly from the loose-leaf book that the publisher provided. There will be a note in the course that the student must purchase the textbook and only the first chapter will be provided. The reason this will be included is the financial aid process at Stark State College can take some time and many students are unable to purchase textbooks until partway through Week 1 of their courses. It's a struggle we see every semester.

For the assessments, I will be using the following tools:

Quizzes will be developed in Google Forms. This will allow me to create various formats of questions such as true and false, multiple choice questions and essay questions. Google Forms is very flexible so I will be able to assign points per question and add feedback for automatically graded quizzes.

Discussion Forums will be developed using Padlet. The reason this tool was chosen is it has a lot of flexibility. Students can respond to post and create posts just like in a LMS. They also have the capability of adding images, links and videos into their posts. It's also very easy to use which makes it ideal as there is not a technology barrier.

Homework assignments/hand-on activities will be developed in Google Forms. There is an option where the student can upload files into a Form. This is ideal since

for this class the student would be uploading .zip files and Microsoft Office documents.

For the help section, I will be using the following tools:

Videos will be created in Camtasia and uploaded to YouTube. Camtasia has a screen capturing option so I can create “how to videos”. The editing tools in Camtasia are easy to use and allow me to quickly edit and upload videos to YouTube. Once the video is uploaded, closed captioning will be added to ensure accessibility to all users.

For the Grades section, I will be using the following tool:

Thinkwave has been chosen for the grades section. The website will be embedded into the Google Site. Users will have directions that they can use to access grades. This won't be relevant to the design of this OLE but is being included since my students in Blackboard would see a grades page.

Briefly describe your planned design process include curriculum, assessment and instruction.

My design process is underway. First, I met with the Course Coordinator to understand why the course needs redeveloped and discuss the requests of the teachers in the department. Next, I laid out the content that will be used for each week of the course that way I had a development plan. Finally, I created a Google Site with the navigation I needed for the course. Since this is similar to Blackboard, it was rather quick for me to do. The preplanning and creating my platform was my first major achievement in this project. This site can be accessed from the following website address:

<https://sites.google.com/view/aubleyleinformationssystem/lessons/week-1>

Now the real magic starts! I will be working on the start here section of the site. I plan to include the items that are recommended by Quality Matters. There will be a course overview that details the information the user will learn in the course and directions for reviewing the materials and completing the quiz.

Course Overview

Welcome to CIS126 Fundamentals of Information Systems!

This course is designed to familiarize students with core information systems principles and practices. Topics include, but are not limited to, types of information systems, hardware and software, data modeling, database systems, internet technologies, systems development, careers, global and social impacts, and industry trends.

This course is divided into 16 weeks. While most of the coursework will not require you to be online at a particular time, you will need to meet certain deadlines to keep pace with your classmates as the semester progresses.

Please refer to the course calendar so that you are able to remain on target enabling you to experience a positive learning outcome for this course. You should also review the master and course syllabi for important information.

The links below contain all the important facts and information to help you experience a successful semester.

After you review the content, make sure you complete the Start Here Quiz listed at the bottom of the page.

There will be an important course documents to review section that includes an instructor welcome, class policies, course level learning objectives, required software and technical skills for students, expectations, required book information, netiquette guidelines, a course calendar, accessibility and privacy policies for content and the rubric used for discussions.

Important Course Documents to Review

Click on each item to open it and review:

<p>Instructor Welcome</p>	<p>CIS126 Class Policies Q&A</p>	<p>Course Learning Objectives</p>	<p>Required Software & Technical Skills</p>
<p>Expectations - Yours and Mine</p>	<p>Required Book</p>	<p>Netiquette Guidelines</p>	<p>Accessibility & Privacy Policy</p>

Finally, there will be an assignment listed and directions for what to do next. I want to ensure the students have read the materials listed and understand the expectations of the course. To do this, I will create a quiz over the Start Here page materials. If a student does not answer a question correctly, they will be provided with feedback on what the correct answer is after they submit the quiz.

Start Here Assignments

Click on each item to complete it:



[Start Here! Quiz](#)

After completing the Quiz, you will want to go back to the Lessons page and begin your Week 1 lesson.

The Week 1 lesson will then be created. This lesson will serve as my template for the other weeks of the course. The goal is for each week to have the same layout that way students become comfortable with the format and understand what to review and complete each week. The weekly layout is shown in the screen shots below.

1. The title for each week will be in the header section of the site. The actual information we will cover will be listed below it:



Introduction to Information Systems & Computer Basics

2. An overview of the lesson will be listed. This will help the students understand what will be covered, what they should review and what assignments they are to complete for the week.

Lesson Overview:

This week we will have an introduction to what information systems is and learn some basics of organizing and working with files.

Read & Review:

- All items in the Materials folder
- Chapter 1 of your book

Assignments this week:

- Start Here Quiz (located on the Start Here! page)
- Introduction Discussion Forum
- File Organization Lab
- Chapter 1 Information Systems Review

3. The Learning Objectives will be displayed as a table. These have been designed to help them understand what they will learn that week in the class and to help them understand how they align with the Course Level Learning Objectives.

Learning Objectives:

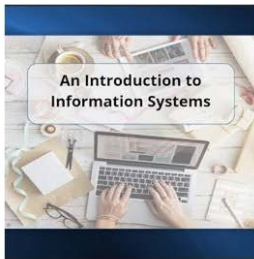
Course Learning Objective(s) Met by Weekly Learning Objective	aligned with	Weekly Learning Objective
Demonstrate proficient knowledge of basic computer network environments (GLO 1,2,3,4,5,6)	↔	<ul style="list-style-type: none"> List the parts of an information system Identify the four types of computers and the five types of personal computers
Demonstrate advanced knowledge when working with Hardware and Software components (GLO 1,2,3,4,5,6)	↔	<ul style="list-style-type: none"> Unzip compressed files Create compressed files Create folders and organize files

4. The Materials that the students are to review will be the next thing they see. There will be a note from the instructor with any additional information they may need and then the actual materials will be listed. This will include directions to read the specific chapter of the textbook, virtual lectures and other items such as a pdf of the book chapter.

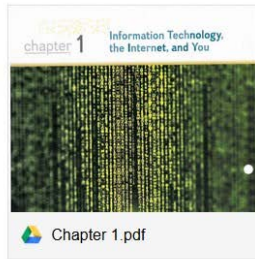
Materials:

Instructor Notes:

Review all the items listed below. You will find Chapter 1 included in this folder. This is to assist you if you have not received your book yet. You must have it by next week, as this is the only week the chapter will be included in the materials section.



[Introduction to Information Systems Lecture](#)



[Chapter 1 of the Book](#)



[File Organization](#)

5. Assignment information will be listed. This will include a note from the instructor and a table that shows how each homework assignment is aligned with the weekly learning objectives.

Assignments:

Instructor Notes:

Complete all assignments listed in this area. If you have questions, please email your instructor.

Homework Assignment	aligned with	Weekly Learning Objective
Start Here Quiz Introduction Discussion Forum	↔	<ul style="list-style-type: none"> This assignment introduces you to other students. It is not measured by the weekly learning objectives.
Chapter 1 Information Systems Review	↔	<ul style="list-style-type: none"> List the parts of an information system Identify the four types of computers and the five types of personal computers
Organize Files Lab	↔	<ul style="list-style-type: none"> Unzip compressed files Create compressed files Create folders and organize files

6. Rubrics and any Start Files for Assignments will be listed.

Rubrics & Start Files for Assignments:

Requirements	Some Requirements Met
post.	2 (20.00%) Student created an initial post that add value to the discussion.
on other posts.	2.5 (25.00%) Commented on other post comments did not add value to discussion.
or more	0.5 (5.00%) Posts contained 1-2 grammar errors.

[Rubric for Discussion Forums](#)

Professor	Completion	Notes
2 (20.00%) Student completed both files correctly. (Chapter 1 and Week 3)	1 (10.00%) Student completed one file correctly.	0 (0%) None
2 (20.00%) Student created a folder correctly, a ZIP file and a Lab 5, Week 3, Week 6 (Chapter 1)	1 (10.00%) Student created some folders correctly.	0 (0%) None
3 (30.00%) Student organized files correctly.	1.5 (15.00%) Student organized some folders correctly.	0 (0%) None
3 (30.00%) Student copied files correctly.	0 (0.00%) None	0 (0%) None

[Rubric for Organize Files Lab](#)



[Organize Files Lab - Starting Files](#)
[Download before you start the lab!](#)

7. Assignments will be listed.

Assignments to Complete:



[Introduction Discussion Forum](#)



[Chapter 1 Information Systems
Review](#)



[Organize Files Lab](#)

Jessica Aubley

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Strategies for Online Teaching & Learning

OLE Final Project Descriptive Paper

Link to final project:

<https://sites.google.com/view/aubleyoleinformationsystem/home>

Fundamentals of Information Systems

Description of the Project

The basis for my learning environment is a redesign of the getting started content and week one lesson for Fundamentals of Information Systems. This is an existing course that is taught at Stark State College. The current course is being retired because it does not meet the goals the instructors have set for it, the students dislike the Mindtap platform that many of their assignments are in, the current book does not meet the learning objectives and the materials are not designed to meet the various learning styles of our users. I have been tasked with the redesign of the whole course but since this process takes many months, I will focus on the getting started materials and first lesson for this project. These will give you a good understanding of the class layout, objectives and how the materials and assessments meet these learning objectives.

I have chosen to use Google Sites as my platform for this project. The reason I selected Google Sites is it gives me the opportunity to set up navigation and page layout similar to what my students will see in my live online course. My goal is to be able to take this content and important it into Blackboard so it's critical that the experience and layout is similar for this project. The layout includes a home page where Weekly Announcements are placed, this is the first thing the student sees when entering the course. It will allow them to have a good understanding of how to get started and what to complete for week 1. The next thing on the navigation is a Lessons link, when the user clicks puts their mouse on it, a list of the lessons displays. The first lesson is called "State Here!", on this page the student is introduced to all of the important information they

need to know about the class. After they review this content there is a quiz they have to take. They then move onto the Week 1 lesson which is set up in a similar manner. There are materials they must review that focus on the learning objectives that are set for the week. After reviewing these materials, there are multiple forms of assessments they must complete. Each assessment is designed to measure their knowledge of the weekly learning objectives. The next link on the navigation is discussion forums. The first forum listed is for general course questions. This is a way that the students can interact with each other. The next link is a grades page. For this project I have chosen to embed the thinkwave gradebook. It will not be active for review but rather is a place holder since my students will have a gradebook that is similar in their live course. The next link is a contact link. This page has my email address, office location and phone number. My goal for all classes is to give students multiple ways to reach me. While my students are online, I believe that they should still have access to me via phone or be able to schedule a meeting either in person or virtually. The final link is the help link. This page contains tutorial videos on to use the Google Site and items listed on it. These are general videos that I developed for my WBLS project but I've included them since they are similar to the ones we have for Blackboard.

Materials for this project were created using Articulate Storyline 360, google slides and scanned documents. The Start Here materials mainly use Google Slides and images. The reason this technology was chosen was it's similar to how students will see content in Blackboard. Each item will be listed

and then the student will click on it to read the content. For the week 1 lesson, I used a scanned pdf of the textbook. This was used because students often order their books of Amazon and they do not arrive in time for the first day of classes. I also see many students have financial aid issues and they are not able to get their books until their voucher is completed by our Registration team. The goal is for them to have access to all the materials they need for week one of this course. The lectures for week one were created using Articulate Storyline 360. This program gives me the flexibility to design slides, add audio and video, add closed captions to the audio and create slides where students have to do something such as click on an image to find out more. Over the years, I have found that interactivity like this keeps the students interested in what they are learning. All technology used for producing these materials is easy for students to use. There is no training required on these tools.

For assessments, I used a varied approach. My goal was to promote student to student interaction, student to content interaction and student to instructor interaction. I want them to understand from the first week of class that all forms of interaction will be required in the course. To achieve this, I used several technologies in my project. For student to student interaction, I created an Introduction Discussion post where the students use the Padlet tool to introduce themselves and respond to two other student's introduction posts. My hope is this will help them get to know their classmates and be a stepping stone for discussions later on in the course. For learner to content interaction, I developed a hands-on lab where students will have to complete the tasks they

learn from the video in the lecture. There are also two quizzes that they students must complete. They have to review the content in order to have a good understanding of how to answer the questions. All of these assignments were created using Google Forms, this technology was chosen because it's flexible in regards to question types and looks similar to the assignment boxes and quizzes that my students will use in Blackboard. Since this may be new technologies to some students, tutorial videos have been placed on the help page for students to review. Finally, student to instructor interaction will occur when the assignments are graded. The start here quiz will have automatic feedback after the student submits so they have instant clarification of what they have missed. The other quiz and lab will be graded and feedback will be provided to the student on their grades page. With these varied assessments, I believe the students will have a good understanding of the interaction that will be required within the course.

How TPACK Impacted the Project

While developing my OLE, my goal was to include all aspects of the TPACK model into the project. This included pedagogy, content knowledge and technology. We know from research that if these areas are successfully implemented students are more likely to succeed in an online course.

My first focus was pedagogy. I started by reviewing who the students are that take this course and their experience levels with Computer Science information. Our students vary in age from late teens to older adults. For most students, this course will be one of the first they take so it was critical the course

to make the easy to navigate and the content was easy to understand. Since the age range of my students is rather broad, it was important I covered the basics of working with files since they will be required to do this in their courses at the college. Part of the goal of this class is to set them up for success in their other Computer Science classes.

The other important factor for pedagogy was the learning styles of my students. In Computer Science, most of our students are Visual or Auditory learners. This was important for me to keep in mind when developing the content for the OLE. I used the Universal Design for Learning principles when creating materials and assessments. I wanted to ensure I met the needs of all my students. For each lesson, I created a presentation that had slides with the information, recorded audio and closed captioning. This allows the students to decide how they view the presentation. Assessments were varied that way all learning styles had the opportunity to succeed. While students must complete all the assignments, each is weighted at a similar manner that way they are not punished if they have difficulty with a format such as quiz taking. Using Universal Design for Learning principles, I was able to create a course where all learners can succeed and eliminate barriers for students with disabilities.

My second focus was content. When I started working with the content I used the Backwards design approach. I started by setting the Weekly Objectives that I wanted students to meet. My goal was to develop authentic assessments and content that measured the achievement of these learning objectives. After I was sure I had measurable learning objectives, I determined which format each

assessment should be put into. I then created the assessments. After they were completed, I created the learning materials that would be used to teach them what they needed to know to master each learning objective. Finally, I uploaded all the materials onto my OLE. I used graphics that showed the students what the learning objectives were and how each assignment is aligned with specific objectives. My overall goal was to ensure they students understood how everything aligned in the course.

My final focus was choosing technologies that would be implemented into the course. When developing content, I wanted to ensure that technology was not a barrier in learning. To do this, I used tools my students are used to working with and provided help videos for how to accomplish tasks that I thought they may not be as familiar with. Google Sites was used since the navigation is set up like any other website they navigate and I could organize pages with titles, subtitles and horizontal lines so students can quickly identify each element of the page. Articulate Storyline 360 was used because it's easy to navigate and there in no additional software students are required to download. Google Forms and Padlet were used since they are easy to use tools. Students should have no issues creating posts or completing quizzes and assignments. I believe keeping technology simple will help my students focus more on learning the content they worrying about navigating the system and using the tools.

Design and Development Process

My development process included an initial meeting with the Course Coordinator to discuss the needs of the redesign. She provided me feedback

from the Faculty and students regarding the existing course. After evaluating the feedback, reviewing the course descriptions and course learning objectives and going through the textbook, I formed a plan for redevelopment. The Coordinator reviewed the plan and approved the new design. Having an approved plan is always the first process when I start any project. It ensures everyone has the same end results in mind.

Once my plan was approved, I used the started working on layout of the Google Site. It was important to me that students have the same experience on it as they would in the Blackboard learning management system. When my classmates look at my OLE, I want them to have a full understanding of the environment my student encounter in my class.

Once I completed the layout of the Google Site, I started working on the materials for the start here section of the OLE. I wanted to make sure I could provide the students the information they need to be successful in the course. I reviewed the Quality Matters Rubric and incorporated the items listed in General Standard 1. Since these are National Standards I felt it was a good reference for creating this section of the OLE.

I moved onto Week One. In this lesson, I used Backwards Design to create my content. My goal was to ensure that all materials were created to promote learning of the weekly learning objectives (Standard 4.1 of the Quality Matters Rubric). The assessments were created to measure the achievement of these objectives (Standard 3.1 of the Quality Matters Rubric). Since I used Backwards Design, I was able to really focusing on developing around my

learning objectives. I feel this type of development is beneficial to students as it ensures that all of the content nicely aligns.

Using Project with Students

I plan on taking the content I have created and moving it into Blackboard. This is the required learning management system for Stark State College so, all my content must be presented to my students using it. Once I move the content into Blackboard, I will be using it for the first week of my CIS126 Information Systems Class which will be taught in Spring Semester. Since the content for the first week is fully developed, there won't be anything I have to do for that week of class other than contact my students to remind them they need the textbook and provide feedback on their assignments.

I will be continuing to develop more content throughout the rest of the summer and fall semester. The goal will be to have all sixteen weeks developed and an internal review completed before November 2019. Once the course has met the internal review standards, it will be ready for me to teach in Spring semester. To determine the success rates of the course, I will use the grades students earned in 2019 and compare them to the grades students earned in 2020. I will also review the end of semester feedback and make any necessary changes. Once the course has been taught for a full year, it will be sent to Quality Matters for a Peer Review. My goal is to ensure it's a quality class that meets national standards.

Final Product:

<https://sites.google.com/view/aubleyleinformaticsystem/home>