Middle Georgia State University

School of Computing
Department of Information Technology

SECTION 1 - GENERAL COURSE INFORMATION

Course Title:	Information Technology Project and Program Management
Course Prefix and Number:	ITEC 8130
Course CRN#:	21667
Semester & Session:	spring 2023 – Term II
Campus Location:	Online
Meeting Days:	This course will be conducted completely online
Meeting Time:	This is a doctoral-level course and will be conducted completely online in an asynchronous format. Access via D2L Course Shell

INSTRUCTOR'S INFORMATION

Name:	Dr. Scott C. Spangler, Assistant Professor of the School of Computing
E-mail Address:	Scott.spangler@mga.edu
Office:	PSC 335
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Office Hours:	**Monday** Noon to 3 p.m. **Tuesday** Noon to 2 p.m. **Wednesday** Noon to 3 p.m. Available by Appointment

COVID-19 STATEMENT

The University System of Georgia (USG) continues to recognize COVID-19 vaccines and boosters offer safe, effective protection and urges all students, faculty, staff and visitors to get vaccinated and/or boosted either on campus or with a local provider.
We encourage our MGA community to adopt a self-care and personal responsibility approach to wellness as positive actions to protect self and others; each of us doing our part to keep the MGA community healthy and campus academics and activities thriving. We ask you to complete the ***self-report form*** *if you have tested positive to COVID-19 and review the* ***Quarantine and Isolation Calculator*** *to determine the appropriate actions to take. Visit updated information at this website:* ***https://www.mga.edu/coronavirus/*** *.*

Carefully review your syllabus, D2L announcements, or email for details

SECTION 2 - DETAILED COURSE INFORMATION

Expected Characteristics: ***The ability to work and think independently is one of the fundamental requirements for studying in the DSc IT degree program. Being independent means that you are confident and highly motivated. You take initiatives and have the ability to take responsibility. You are committed to the program, have good time management and organizational skills. Other vital requirements are curiosity, creativity, discipline and productivity.***

Course Prerequisite: Admission to DSc in IT program

Credit Hours: 3

Course Description: This course provides students with the skills and knowledge to successfully manage a program of multiple IT projects. Learners will understand how program managers enable projects, implement strategy, monitor progress, and manage risks, issues, scope, schedule, budget, and quality.

Course Philosophy:

Important note to students about the course:

Students will gain from the course knowledge to successfully understand the core elements of how an IT portfolio or program is successfully managed and monitored for strategic organizational alignment. The core of the course focuses on understanding the intricate elements involved in balancing a portfolio by the program manager office (PMO).

Readings and activities in the course focus on students understanding the PMO's key decision-making processes to balance the organization's scorecard. This course is about students developing knowledge about how projects are enabled through implementation strategy, monitoring progress, and risk tolerance, scope, schedule, budget, and quality assurance.

The goal of the course is to comprehend what a program management office considers when accepting or rejecting projects and how it reports these findings to a board of directors or leadership. Students will work independently to form knowledge about the skills engaged in the PMO's office. Finally, students will construct a program and presentation based on the knowledge and research constructed to suggest a program inside their team's portfolio.

Student learning outcomes:

Upon the successful completion of the course, the student will be able to:

- Apply project, program, and portfolio concepts based on the organizational needs.
- Manage program benefits.
- Estimate risks inherent to the organization's decision to begin projects and programs.
- Create a program communication plan.
- Plan a program.

Topics:

We will examine the following areas including, but not limited to:

- Budget
- Communication plan
- Disaster plans
- Governance
- Portfolios

- Program lifecycle
- Program management
- Program team
- Project management
- Quality assurance
- Quality control
- Risk
- Schedule
- Scope
- Strategy

Required course materials: Organizational Project Portfolio Management: A Practitioner's Guide. Prasad S. Kodukula Kodukula. ISBN-13: 978-1932159424.

Technology Requirement: *The following will be used in this course:*

- Students are required to have access to a computer and the Internet. All assignments, the course schedule, announcements, course syllabus, course content, rubrics, and supplemental course materials are posted on the D2L Course Shell.
- We may use a computer webcam with a built-in microphone to participate in possible virtual meetings with the instructor and group members.
- Microsoft Office (Word, Excel, & PowerPoint)
- Microsoft Excel and Word Software is suggested for this course. The student version is available on Office 360. Contact the Dept. Chair for additional information.

Library/Learning Resources: As a Middle Georgia State University student, you have complete access to GALILEO (Georgia Library Learning Online), a virtual library of licensed commercial databases. It provides access to over 100 databases indexing thousands of periodicals and scholarly journals. There are over 10,000 journal titles available in full text. Additional GALILEO resources include e-books, government documents, reference collections, and video databases. The Middle Georgia State University library also has a core collection with locally purchased resources to support this graduate course. Currently, the exclusive e-holdings for the M.S. in Information Technology graduate courses are as follows: e-Journals = 1,661 and e-books = 4,325. The following are examples of online databases that support this undergraduate course. They are available to you through GALILEO and/or institutionally funded subscriptions:

- ACM Digital Library
- Computer Source
- Computing (ProQuest)
- Academic Search Complete
- Research Library (ProQuest)
- Wilson Omnifile: Full-Text Mega Edition
- Google Scholar

SECTION 3 - COURSE ASSESSMENT INFORMATION

Overview of Grading

Excellent. The quality of work meets the doctoral requirements in both originality and mastery of the material. This is equivalent to an A grade.

Satisfactory. The work meets the minimum requirements. The work is short of excellence, originality, and does not fully demonstrate mastery of the material. This is equivalent to a B grade.

Unsatisfactory: The work is deficient as the minimum requirements have not been. This is equivalent to an F grade. (Anything below a Satisfactory (B-level) is deemed to be a failing grade.)

Your grade for the semester will be determined by the following assessment of completed assignments. The letter grade for this course is based on the total points earned on all assignments.

Assignments	Weight
Portfolio Alignment (Triple constraint and Business Case)	Short answer Paper = 10%
Risk Analysis Assignment (Individual)	Short answer Paper = 10%
Tolerance and Termination Criteria assignments (Individual)	Short answer Paper = 10%
S.W.O.T. Portfolio Analysis/Assessment Assignment (Individual)	Short answer Paper = 10%
Analyzing an organization's communication plan and decision-making models	Short answer Paper = 10%
Final Project (Team) Written sections (3@10%) & Presentation (10%)	3 executive summaries and 1 presentation Total= 40%
Total Achievable Grade Points =	**100**

The following point scale will be used to calculate the final course grade. Note: a grade of B or higher is required to successfully complete the course.

- **A: 90% -100% Excellent Work**
- **B: 81% - 89% Satisfactory Work**
- **C: 80% - Unsatisfactory**

Philosophy

The goal of this course is for students to understand the internal assessment methodologies involved with how "an organization balances its programs and portfolio scorecards for triple constraint alignment and stakeholder reporting." Students will actively learn and constantly apply what they learn to practice through exercises. While analysis of datasets will be used on a weekly basis, the major emphasis for students will be learning how to interpret results to make sound decisions for their organizations.

Overview of the Module's Sequences

Important note to students about the course:

Students will gain from the course knowledge to successfully understand the core elements of how an IT portfolio or program is successfully managed and monitored for strategic organizational alignment. The core of the course focuses on understanding the intricate elements involved in balancing a portfolio by the program manager office (PMO). Readings and activities in the course focus on students understanding the PMO's key decision-making processes to balance the organization's scorecard. This course is about students developing knowledge about how projects are enabled through implementation strategy, monitoring progress, and risk tolerance, scope, schedule, budget, and quality assurance. The goal of the course is to comprehend what a program management office considers when accepting or rejecting projects and how it reports these findings to a board of directors or leadership.

About the modules:

Throughout the modules, students will read suggested material, and create a self-guided response on the module's learning objective topics. Modules 1-5 focus students on the course's learning outcome and topics. The module's tasks (assignments) generate knowledge about organizational portfolio criteria assessment areas and alignment. To create course value, students will be challenged in the last three modules to apply knowledge in a simulation. Students should keep weekly a self-guided reflection journal (glossary) of terms and descriptions. The journal's notes will aid the student in crafting their executive summary elements with his or her peers for the final administrative portfolio summary and portfolio presentation (Each module's knowledge will have an attribute directed towards the overall team's final project executive summary).

As an example, students will learn in the first module how a project management office (PMO) first considers strategic alignment to the organization's triple constraint through SMART projections in the foundation (initiating) phase (*Learning objective 1: Apply project, program, and portfolio concepts based on the organizational needs*). The knowledge gained in module one will be an intricate internal team discussion in Module six to direct their executive summary's introduction and foundation for a balanced scorecard presentation.

To start the course in Modules 1-5, students can employ data from ***the Genematrix profile or their team organization if data is permitted to be shared.*** (The profile can be found in Kodukula, 2014, pp. 254-268). Additionally, Kodukula's (2014) case study on the Genematrix profile and dataset will be used for the final project. Hence, the journal will help the students create a plan to understand their organization's portfolio and how it creates a balanced scorecard.

Final Project Presentation and Executive Summary:

The purpose of the final project and presentation focuses on the team's presentation and executive summary program proposal. The goal is for students to understand inherent risks in selecting projects to form a new portfolio and new organizational program. Students will communicate their solutions to the class utilizing scorecard illustrations and video techniques. The final module's deliverables are the team's executive summary proposal and a virtual visual communication presentation (a short video maximum 10 minutes) supporting their proposed program. Students should present their simulation in a professional manner to a board of directors (instructors) for program funding.

The constructs of the three-part assignment (starting in module 6) propose 1) the student teams are advocating to outsource a project for cost-savings, and 2) to make an internal new division (program) in the organization. The new program portfolio is designed for stakeholders' investments and growth in the organization's overall portfolio. To help support the team's case to the board, teams will create an executive summary in three parts and a presentation based on their findings. The final project will outline four selected endeavors with one project being outsourced for global governance contemplations that include risk management and quality assurance calculations.

Students should have and an extensive summary and analysis (risk, disaster planning, quality assurance, and control) on each portfolio venture to support its selection. Students must describe project evaluation methods (tangible or intangible) through one or more methods: Earned Value Management (EVM), Planned Value Management (PV), Actual Value (AC), Budget at Completion (BAC), Return on Investment (ROI), or Net Present Value (NPV).

Module Assignments Outline

Module 1

Learning outcome: Apply project, program, and portfolio concepts based on the organizational needs.

Module one will discuss the philosophy behind what is project portfolio and program management. It will focus on understanding an organization's triple constraint (mission, goals, and strategies) related to portfolio alignment. Specifically, the following project topics must be emphasized: alignment, creation, balancing, relationship, termination, and program lifecycle.

Learning Activities:

Students will create an executive summary introduction. The paper must first describe their organization and its triple constraint (Note, Kodukula (2014) case study can be used as the student's organization framework). Students will frame one project through the lens of the organization's triple constraint and the project funnel stages (Kodukula, 2014, pp. 43-77). The paper's expression should be orientated in a professional communication to a board of directors. Handouts and reading assignments will be provided to students.

Tasks:

1. Students should outline the organizational triple constraint criteria.
2. Students should outline the strategic alignment elements and governance considerations.
3. Students should discuss value balancing with organizational alignment constructs.
4. Students should chronicle the portfolio's funnel & filter methodologies.

Module 2

Learning outcome: Estimate risks inherent to the organization's decision to begin projects and programs.

The purpose of module two emphasizes students continuing to assess their organization. This module's executive summary section describes how organizations can assert quality assurance and quality control measures in relation to program and portfolio management. Secondly, the module will focus on understanding how a project management office (PMO) asserts program benefits in relation to the organization's triple constraint. Lastly, the module should focus on strategic program alignment to the organization's triple constraint.

To understand project benefits, Students will learn how organizations discuss apply financial portfolio principles to project portfolios: alignment, value creation, portfolio balancing, and long-term performance attributes. Reading assignments and additional handouts will be provided to students on quality assurance and quality control.

Learning Activities:

Students will craft their professional summary section on how their organization considers portfolio alignment. Particularity, students will first focus on how their organization considers project value (tangible and intangible). To understand the assertion, students should review and explain the organization's quality assurance and control plans. The summary should take a position to explain the organization can better align the strategies for the triple constraint. The new directives should detail considerations through portfolio balancing and value creation for stakeholders. Additionally, students will continue to catalog terms into their journals.

Tasks:

1. Describe how the organization considers project value (tangible and intangible).
2. Analyze and assert how the organization's quality assurance and quality control plans are in strategic alignment?
3. Detail through a portfolio balancing method, how the organization's IT portfolio or program communicates value creation to stakeholders?

Module 3

Learning outcome: Plan a program.

The purpose of this module is to first briefly cover and consider how project portfolio managers evaluate ongoing projects and new projects. The students will observe how sunk costs in a project's initiation phase can create early termination procedures. Additionally, students will observe and analyze other causes for project termination criteria: project evaluation criteria, scope, portfolio benchmarking failures, contingencies, tolerance, and work breakdown schedules in connection with human resource allocations. Students will uncover how PMOs often eliminate projects or discontinue a low-preforming project in a portfolio for a higher rated investment because of team management redistribution. The readings for this section come from the required text and supplemental exterior sources.

Learning Activities: Plan a program

Students should first create a short summary describing how three projects in their organization have strategic organizational alignment value and long-term value forecasts for stakeholders. Students will investigate how sunk costs can discontinue an IT project during the initiation phase or cause it to be terminated from a portfolio. Students may uncover reasons for a project cancellation that can be discussed as part of their team's overall final presentation and executive summary.

Inside of this summary, students should outline the sunk costs and human capital investment needed for each project. The human capital investment consideration should explore a work breakdown schedule and cost schedule of the investment to help determine feasibility. Students should consult the U.S. Bureau of Labor Statics https://www.bls.gov/oes/current/oes_ga.htm, for the purpose of determining a cost schedule and WBS. Students should create a fictitious Gantt chart (if not obtainable from your organization) to show elements and timelines of a project to aid in determining feasibility. Students should explain how or why the WBS schedule can forecast termination.

Tasks:

1. Students should first create a short summary describing how three projects in their organization's portfolio have strategic organizational alignment, value, and long-term value forecasts for stakeholders
2. Secondly, students must investigate how sunk costs can discontinue an IT project during the initiation phase or cause it to be terminated from a portfolio.
3. As part of the sunk cost feasibility study, students should outline the human capital investment needed for each project.
4. Students should create a fictitious Gantt chart to portray elements and timelines of a project to aid in determining feasibility.
5. Students should explain how or why the WBS schedule can forecast feasibility or termination.

Module 4

Learning outcome: Manage program benefits.

The purpose of this module will focus on students synthesizing projects' data to assess the portfolio's value based on a benefit-cost-risk equation. Students will determine the validity and reliability of a running project through discussed analysis measures. Students will concentrate on understanding the differences between earned value management (EVM), estimated costs (EC), actual costs (AC), return on investment (ROI), and net present value (NPV).

Learning Activities:

Students will construct a strength, weaknesses, opportunity, and threats (S.W.O.T.) assessment of the organization's portfolio. Students will create a scoring model to understand what projects in their organization are effective or need to be terminated from the portfolio or program. Students should select three projects to outline. The scoring model should construct criteria that are SMART utilizing the S.W.O.T. discussion.

Tasks:
The Scoring module should assess these criteria areas:

1. Organizational Alignment (goals, strategies, mission),
2. Profitability,
3. Probability of timely completion,
4. Probability of technical completion success,
5. Probability of market success,
6. Future opportunities,
7. Return on investment to stakeholders' projection.

Module 5

Learning outcome: Create a program communication plan.

The purpose of the module centers on the student analyzing their organization's current communication plan and visual decision-making models. Students will focus on how the project management office (PMO) communicates project attributes in the portfolio to stakeholders for organizational alignment and strategic global governance. Additionally, Students will appraise how an organization differentiates its global workforce investment from a business case perspective.

Learning Activities:

Stakeholder reports are a sizable portion of the PMO's role. In most cases, the PMO outlines the findings in the SMART analysis through a time-based quarterly S.W.O.T. construction. Students can use the dataset in Kodukula's (2014) case study (Genematrix profile) as a substitute for their organization's projects to analyze the data for the assignment if nothing is available openly to the team. Each student must interpret the dataset's results to help leaders make sound decisions in the communication plan assignment.

Tasks:

1. Students will utilize the past assignment's knowledge to design a stakeholder communication plan.
2. Secondly, students will construct a graphical/visual communication based on the SMART criteria's finding. The graphical illustration must score the portfolio and highlight the lowest ranking for the termination in a secondary dashboard outtake.
3. The report must outline through a S.W.O.T. analysis thoughts for enhancing the portfolio globally.
4. Students will evaluate the organization's portfolio to understand and project what is needed to create a global workforce for one project to be escalated internationally. Students align the suggestion with the organization's triple constraints.

Module 6-8 Assignment

Final Project Presentation and Executive Summary:

The purpose of the final project and presentation focuses on the team's presentation and executive summary program proposal. The goal is for students to understand inherent risks in selecting projects to form a new portfolio and new organizational program. Students will communicate their solutions to the class utilizing scorecard illustrations and video-prototyping techniques. The final module's deliverables are the team's executive summary proposal and a virtual visual communication presentation (a short video maximum 10 minutes) supporting their proposed program. Students should present their simulation in a professional manner to a board of directors (instructors) for program funding.

The constructs of the three-part assignment (starting in module 6) propose 1) the student teams are advocating to outsource a project for cost-savings, and 2) to make an internal new division (program) in the organization. The new program portfolio is designed for stakeholders' investments and growth in the organization's overall portfolio. To help support the team's case to the board, teams will create an executive summary in three parts and a presentation based on their findings. The final project will outline four selected endeavors with one project being outsourced for global governance contemplations that include risk management and quality assurance calculations.

Students should have and an extensive summary and analysis (risk, disaster planning, quality assurance, and control) on each portfolio venture to support its selection. Students must describe project evaluation methods (tangible or intangible) through one or more methods: Earned Value Management (EVM), Planned Value Management (PV), Actual Value (AC), Budget at Completion (BAC), Return on Investment (ROI), or Net Present Value (NPV).

EXPECTATIONS

Online courses are not self-paced and regular participation in online courses is required and will be recorded by your

SECTION 4 - COURSE EXPECTATIONS

instructor. Students are expected to complete all course assessments using D2L.
Online learning assumes a high level of maturity and professionalism. It is designed to make learning more convenient but no less rigorous. The lack of a formal meeting schedule in an online course can be liberating. It can also be demanding because you must determine when to make time for class. Self-discipline and good time management skills are necessary when taking an online course.

Please remember that you will spend as much or more time completing an online course as you would taking it in a traditional face-to-face/classroom format. The special circumstances of taking an online course demand regular and consistent participation. Be sure to pace yourself throughout the semester making sure your responses to communications and assignments are timely. If you are not able to participate in any assigned class activities, you must contact your instructor immediately.

The instructor is required to report "no-shows" or students who do not show up on the first day of class. Therefore, all students enrolled in the course must verify their enrollment. This can affect financial aid and you may be dropped from the class. Your instructor will notify you as to how to verify your enrollment before the beginning of the term to ensure that you are not reported as a "no-show".

ATTENDANCE POLICY

Students whose number of absences is more than twice the number of class meetings per week may be assigned a failing grade for the course. Students who have more absences than the number of class meetings per week but less than twice the number of class meetings per week will be penalized on the participation portion of the grade. Students who have absences that are less than or equal to the number of class meetings per week will not be penalized. This policy holds for face-to-face and hybrid courses.

Students that do not submit any work for more than 14 consecutive days in an online course or partially online course may be assigned a failing grade for the course.

The MGA policy on attendance is found in Section 5.04.05 of the Faculty Handbook and in the Academic Catalog (https://mga.smartcatalogiq.com/2020-2021/Undergraduate-Catalog/Academic-Policy-and-Information/Course-Policies/Attendance-Policy).

CLASS BEHAVIOR EXPECTATIONS AND CONSEQUENCES FOR VIOLATIONS

Middle Georgia State University students are responsible for reading, understanding, and abiding by the MGA Student Code of Conduct." Student Code of Conduct, Responsibilities, Procedures, and Rights are found at

http://www.mga.edu/student-affairs/docs/MGA_Student_Handbook.pdf#page=45.

STUDENT WITHDRAWAL POLICY

Students are encouraged to read the withdrawal policy found at https://www.mga.edu/registrar/registration/drop-add.php before dropping/withdrawing from the class.

Students who wish to withdraw from the University must complete the Withdrawal Form, obtaining the required signature from the advisor, and submitting it to the Office of the Registrar at the Macon campus or the administrative offices at other campuses. Withdrawal is not complete until all withdrawal procedures have been properly executed. https://www.mga.edu/registrar/

Students may withdraw from the course and earn a grade of "W" up to and including the midterm date, which occurs on **April 7, 2023.** After this date students who withdraw will receive a grade of "WF."

https://www.mga.edu/academics/calendars/index.php

POLICY ON ACADEMIC MISCONDUCT

As a Middle Georgia State student and as a student in this class, you are responsible for reading, understanding, and abiding by **Middle Georgia State's Student Code of Conduct.**

Quoted directly from the Student Handbook, I believe it is important that you recognize and understand the following about plagiarism and cheating:

Individuals will fulfill their academic responsibilities in an honest and forthright manner.
Examples of prohibited behavior include but are not limited to: plagiarizing another's work (such as using another's phrasing, concepts or line of reasoning as your own without giving proper credit to the author or creator); submitting course assignments that are not your own; submitting the same paper in different classes without prior approval from both instructors; cheating (the use of any unauthorized means to gain academic advantage on assignments, laboratory reports or examinations); acquiring or using test materials without faculty knowledge; accessing any information, resource, and/or means of communication during an exam or assignment without specific authorization from the professor; failing to follow class policy; obtaining academic benefits through computer fraud or unauthorized access; engaging in academic fraud alone or with others; using material downloaded off Internet without proper citation; illicitly attempting to influence grading; failing to abide by test-taking procedures. The MGA Withdrawal Form, is available online or in the Office of the Registrar. The entire Student Code of Conduct is included in Middle Georgia State's Student Handbook and is available online at https://www.mga.edu/student-conduct/

The penalty for academic misconduct is a grade of zero for the work involved and will be referred to the Dean of Students. Subsequent academic misconduct results in a failing grade for the course.

PLAGIARISM POLICY

A plagiarism prevention service is used in the evaluation of written work submitted for this course. As directed by the instructor, students are expected to submit or have their assignments submitted through the service to meet the requirements for this course. The papers will be retained by the service for the sole purpose of checking for plagiarized content in future student submissions.

POLICY ON DISABILITY ACCOMMODATIONS

Students seeking academic accommodations for a special need must contact the Middle Georgia State University Office of Disability Services in Macon at (478) 471-2985 or in Cochran at (478) 934-3023. Students may also visit the Disability Services Office in room 266 of the Student Life Center on the Macon campus or in Georgia Hall Lower Level on the Cochran campus. https://www.mga.edu/accessibility-services/index.php

DELAYED OPENING OR CLOSING OF THE UNIVERSITY

If class is unable to occur for an opening or closing of the university, go to the online webpage of the course for additional instructions. If there are no additional instructions provided on the course homepage news section, then just plan to meet at the normal next regularly scheduled meeting for the course.

HB 280 CAMPUS CARRY LEGISLATION
https://www.mga.edu/police/campus-carry.php

END OF COURSE EVALUATIONS
Student evaluations of faculty are administered online at the end of each term/session for all courses with five or more students. Students will receive an email containing a unique link to a survey for each course in which they are enrolled. All responses are anonymous, and completion of evaluations is voluntary.
Students are responsible for reading, understanding, and adhering to all Middle Georgia State University student policies, including those linked on the Syllabus Policy page.

Important Dates for Spring 2023

Academic Calendar

ALL DATES TENTATIVE

Events	Short Session II
Classes Begin	MAR 8
Drop/Add (Only for students with existing schedules)	MAR 8-9
NOTE: One day per week classes held only on Mondays, will have the following business day to drop due to the holiday	
Web Registration System Closed for Drop for Non-Payment	MAR 10
University Holidays	MAR 20-26
Last Day to remove Incomplete grades ("I")	
Midterm Grades Due	APR 5
Last Day to Withdraw with a "W" Grade	APR 7
Regular Registration for Fall 2023	MAR 13 – JUL 26
Last Day of Classes	MAY 2

* Registration closes at midnight on the final day of regular and late registration.
All campuses close at noon on Friday, Spring and Fall semesters. Summer semester closed on Fridays.

SECTION 5 - INSTRUCTOR-SPECIFIC POLICIES

General Guidance.

This syllabus is provided for general guidance on course activities and expectations. The instructor reserves the right to modify the syllabus in response to changing student needs or pedagogical circumstances. Changes are announced in class and posted in D2L/Brightspace.

Course Supplemental Website

- This course has an instructor's supplemental website attribute designed to be a "sharing" location for the course. Students are encouraged to visit the website and contribute artifacts for furthering the course (Artifacts need to be submitted for professor's review and approval, first). All students have access to the website and its resources such as journal articles and videos. The website's portal can be found here: ITEC 8130 Students' Resource
- Inside each module, Students will find secondary pages of journal articles and videos to support their course and doctoral journey. Course-specific information is listed on the pages–additional doctoral supplemental pages will have the ability for peer-to-peer sharing and knowledge building.
- The Resources page has archived suggested journal articles related to the assignments and module topics. I have created an archive for all readings located here: https://drive.google.com/drive/folders/1ouburqdISRJbzvaXOs8rs7-v1zbwb54w?usp=sharing
- Additionally, the Resources page (Library and Course Resources) contains library tutorial videos, LibWizard virtual connections to the suggested resource archives, and APA Tutorials for course assignment success.

Graded Individual Assignments (Short essay– three pages maximum)

Students must utilize APA Style for all short-answer essays. Students should focus on using data, readings, and research for decision-making and answers about their organizations and challenge questions. Students will explore, via searching for reliable sources in the library, peer-reviewed articles on Google Scholar, or business expert sources such as Forbes, CIO magazine, etc. articles related to topics. Students will then be asked to write and submit a minimum of five-paragraph (roughly 500 words -- one page, single-spaced to three pages) thoughts, reaction/action, and reflection about the topics. The thoughts, action/reaction, and reflection about the topics must focus on sound decisions based on data analysis and research to elevate an organization's performance and answer the questions.

Graded Team Executive Summary Assignments

Students will work together to analyze the organization's dataset or substituted data from Kodukul's (2014) Genematrix case study to form a new program portfolio. Students will create an executive summary (created over modules six and seven) describing their reasonings for selecting projects for their new program within organizational triple constraint alignment parameters. Students will describe how outsourcing one project will have effects on their decisions. Students will create a balanced scorecard for the new portfolio.

Inside of the executive summary, teams will explain inherent risks to outsourcing globally, quality assurance planning for business continuity and disaster recovery, and return on investment projections for stakeholder's gains. Students will use their personal self-guided journal notes, past assignments lessons, and new citations to help support their decisions and overall executive summary to the board of directors.

Final Project

The final project focuses on the team concluding their executive summary that supports their project selection reasoning, outlines the new program's portfolio for strategic alignment, business continuity plan, and stakeholder gains through a balanced scorecard model. Each team will communicate their solution to the class utilizing visual storytelling and video-prototyping techniques (a 10-minute pre-recorded presentation). The module deliverable is a short video and final program executive summary position paper.

Module Outline

Modules	Objectives	Readings	Assessments
Module 1 **Week 1** **Starts: 3/9/2022** **Ends:** 3/13	*Course Level* Apply project, program, and portfolio concepts based on the organizational needs. *Module Level* Students will learn the philosophy behind what is project portfolio and program management. Students will focus on understanding an organization's triple constraint (mission, goals, and strategies) related to portfolio alignment and strategic program alignment. Topics: • *Portfolio alignment* • *Project value creation,* • *Portfolio balancing,* • *Project Termination,* • *Project lifecycle,* • *Governance variables*	**Required readings:** • Kodukula (2014) chapters: 1, 2, 3, 4 (pp. 43-46). **Suggested further readings to help answer your challenge located in students' resource page:** • De Reyck, B., Grushka-Cockayne, Y., Lockett, M., Calderini, S. R., Moura, M., & Sloper, A. (2005). The impact of project portfolio management on information technology projects. *International Journal of Project Management*, *23*(7), 524-537. • Stretton, A. (2020). Strategic initiatives, project/program management, and responsibilities for benefits realization. *PM World Journal*, *9*. • Stretton, A. (2020d). Increasing project management involvement in the initial choice of projects. *PM World Journal,* Vol IX, Issue IV, April. https://pmworldlibrary.net/wp-content/uploads/2020/03/pmwj92-Apr2020-Stretton-Increasing-PM-involvement-in-choosing-projects.pdf • Terzi, S., Bouras, A., Dutta, D., Garetti, M., & Kiritsis, D. (2010). Product lifecycle management–from its history to its new role. *International Journal of Product Lifecycle Management*, *4*(4), 360-389. • Waheed, Z. (2016). Case Studies in Project, Program, and Organizational Project Management. *Facilities*, *34*(5/6), 375–376. http://dx.doi.org/10.1108/F-07-2015-0051 • Zheng, L. Y., McMahon, C. A., Li, L., Ding, L., & Jamshidi, J. (2008). Key characteristics management in	• Each student must complete the "I am present" assignment before the deadline. This assignment has no points but will be a verification of attendance. • Due: Sunday @ 11:59 p.m. • Assignment 1 • Due: Wednesday @ 11:59 p.m.

Modules	Objectives	Readings	Assessments
		product lifecycle management: a survey of methodologies and practices. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, *222*(8), 989-1008	
Module 2 **Week 2** **Starts: 3/14/2022** **Ends** 3/20	*Course Level* • Estimate risks inherent to the organization's decision to begin projects and programs. *Module Level:* The purpose of the module emphasizes students describing how organizations can assert quality assurance and quality control measures in portfolio management. Secondly, it will focus on understanding how a project management office (PMO) asserts program benefits in relation to the organization's triple constraint with strategic program alignment. Students will understand how to: • Describe project value (tangible and intangible). • Analyze organizational quality assurance and quality control plans. • Understand portfolio balancing methods.	**Required readings:** Kodukula (2014) chapters: 4, Chapters 5, and 6 (pp. 67-75). **Suggested further readings to help answer your challenge located in students' resource page:** Null, G., Cross, J. A., & Brandon, C. (2019). Effects of Lean Six Sigma in program management. *Journal of Manufacturing Technology Management*, *30*(3), 572–598. http://dx.doi.org/10.1108/JMTM-04-2019-0139 QuanLow, R., Abdullah, N. L., & Lai, V. C. S. (2011). Role of information technology in efficient management of quality assurance operation: A case study in a Malaysian small and medium enterprise. *2011 7th International Conference on Information Technology in Asia*, 1–5. https://doi.org/10.1109/CITA.2011.5999507 Teubner, R. A. (2019). An Exploration into IT Programs and Their Management: Findings From Multiple Case Study Research. *Information Systems Management*, *36*(1), 40–56. http://dx.doi.org/10.1080/10580530.2018.1553648 Zocher, M., & Thompson, G. (1992). Cost and Schedule Baseline Development. *American Association of Cost Engineers. Transactions of the American Association of Cost Engineers*, *1*, H.3.1.	• Assignment 2 • Due: Wednesday @ 11:59 p.m. Executive Summary Introduction: 1. Students should outline the organizational triple constraint criteria. 2. Students should outline the strategic alignment elements and governance considerations. 3. Students should discuss value balancing with organizational alignment constructs. 4. Students should chronicle the portfolio's funnel & filter methodologies.

Modules	Objectives	Readings	Assessments
	• How PMO's communicate value creation to stakeholders.		
Module 3 **Week 3** **Starts: 3/28/2022** **Ends:** 4/3	*Course Level* • Plan a program. *Module Level:* The purpose of this module is to first briefly cover the traditional considerations on a project's triple constraint (time, cost, scope) in relation to the portfolio management philosophy. Students will discuss: • How sunk costs create early termination procedures. • Program evaluation criteria, • Scope, • Portfolio benchmarking, • Project tolerance, • Termination criteria, • Work breakdown schedules in connection with human resource allocations.	Readings: Kodukula (2014) Chapter 8, Chapter 9, and Chapter 10 (pp. 67-75). **Suggested further readings to help answer your challenge located in students' resource page:** Bonham, S. S., Scudder, R., Morrato, B., & Pashak, J. (2006). The Molson Coors Operational Portfolio Architecture: A Case Study. *Communications of the Association for Information Systems*, *18*, 35. http://dx.doi.org/10.17705/1CAIS.01835 Boutross, D. (2005). Enterprise program management: A Sprint case study. *Journal of Corporate Real Estate*, *7*(3), 199–209. http://dx.doi.org/10.1108/14630010510631027 Ilic, M., Rankovic, M., Stojčić, M., & Kastratovic, E. (2019). Critical Success Factors in IT Project Management. Case study on IT Banking Front-end IT System Project in Serbia. *Journal of Economic Development, Environment, and People*, *8*(4), 13–23. http://dx.doi.org/10.26458/jedep.v8i4.637 Kobylarz, K. (1992). Establishing a Department of Defense Program Management Body of Knowledge. *Project Management Journal*, *23*(1), 5. Manfreda, A., Buh, B., & Štemberger, M. I. (2015). Knowledge-intensive process management: A case study from the public sector. *Baltic Journal of Management*, *10*(4), 456–477. http://dx.doi.org/10.1108/BJM-10-2014-0170 Näsholm, M. H., & Blomquist, T. (2015). Co-creation as a strategy for program management. *International Journal of Managing Projects in Business*, *8*(1), 58–73. http://dx.doi.org/10.1108/IJMPB-10-2013-0063	• Individual Assignment 3 • Due Wednesday @ 11:59 p.m. Activities **1.** Students should first create a short summary describing how three projects in their organization's portfolio have strategic organizational alignment, value, and long-term value forecasts for stakeholders **2.** Secondly, students must investigate how sunk costs can discontinue an IT project during the initiation phase or cause it to be terminated from a portfolio. **3.** As part of the sunk cost feasibility study, students should outline the human capital investment needed for each project. 4. Students should create a fictitious Gantt chart to portray elements and timelines of a project to aid in determining feasibility.

Modules	Objectives	Readings	Assessments
		Sokianos, N. (1992). A case study in the application of project management. *International Journal of Project Management*, *10*(3), 185.	5. Students should explain how or why the WBS schedule can forecast feasibility or termination.
Module 4 **Week 4** **Starts: 4/4/2022** **Ends:** 4/10/2022	*Course Level* Manage program benefits. *Module Level:* The purpose of this module will focus: • Synthesizing projects' data to assess the portfolio's value. • Benefit-cost-risk equation evaluation. • Understanding scoring methods: earned value management (EVM), estimated costs (EC), actual costs (AC), return on investment (ROI), and net present value (NPV).	Readings: Kodukula (2014) Chapters: 11, Chapter 12 (pp. 153-161), and 14. **Suggested further readings to help answer your challenge located in students' resource page:** Benintendi, R., De Mare, G., & Nesticò, A. (2018). Upgrade the ALARP model as a holistic approach to project risk and decision management: A case study. *Hydrocarbon Processing*, 77–82. Boutross, D. (2005). Enterprise program management: A Sprint case study. *Journal of Corporate Real Estate*, *7*(3), 199–209. http://dx.doi.org/10.1108/14630010510631027 de Oliveira, W. A., & De Muylder, C. F. (2012). Value Creation from Organizational Project Management: A Case Study in a Government Agency. *Journal of Information Systems and Technology Management: JISTEM*, *9*(3), 497–514. Huang, J. C., Newell, S., & S-L, P. (2001). The process of global knowledge integration: A case study of a multinational investment bank's Y2K program. *European Journal of Information Systems*, *10*(3), 161–174. http://dx.doi.org/10.1057/palgrave.ejis.3000402 Ilic, M., Rankovic, M., Stojčić, M., & Kastratovic, E. (2019). Critical Success Factors in IT Project Management. Case study on IT Banking Front-end IT System Project in Serbia. *Journal of Economic Development, Environment and People*, *8*(4), 13–23. http://dx.doi.org/10.26458/jedep.v8i4.637	• Individual Assignment 4 • Due: Wednesday @ 11:59 p.m. Activities: Students will construct a S.W.O.T. analysis to understand and create a scoring module. The criteria will help determine the elimination of one project through scoring criteria areas: 1. Organizational Alignment (goals, strategies, mission), 2. Profitability, 3. Probability of timely completion, 4. Probability of technical completion success, 5. Probability of market success, 6. Future opportunities, 7. Return on investment to stakeholders' projection.

Modules	Objectives	Readings	Assessments
		Näsholm, M. H., & Blomquist, T. (2015). Co-creation as a strategy for program management. *International Journal of Managing Projects in Business*, *8*(1), 58–73. http://dx.doi.org/10.1108/IJMPB-10-2013-0063 Simonsson, M., Johnson, P., & Ekstedt, M. (2010). The Effect of IT Governance Maturity on IT Governance Performance. *Information Systems Management*, *27*(1), 10. Van Steelandt, F. V., & Gelders, L. F. (1979). Financial Control in Project Management: A Case Study. *IEEE Transactions on Engineering Management*, *EM26*(3), 74.	
Module 5 **Week 5** **Starts: 4/11/2022**	*Course Level* • Create a program communication plan. *Module Level:* The purpose of the module centers on students analyzing an organization's communication plan and visual decision-making models. Students should be able to discuss: • Communication models for organizational alignment. • Strategic global governance. • Global workforce investment and triple constraint alignment.	**Readings:** Kodukula (2014) Chapter 12 (pp. 162-166). **Suggested further readings to help answer your challenge located in students' resource page:** Anand, R., Medhavi, S., Soni, V., Malhotra, C., & Banwet, D. K. (2018). Transforming information security governance in India (A SAP-LAP-based case study of security, IT policy, and e-governance). *Information and Computer Security*, *26*(1), 58–90. http://dx.doi.org/10.1108/ICS-12-2016-0090 Chin, P. O., Brown, G. A., & Hu, Q. (2004). The Impact of Mergers & Acquisitions on IT Governance Structures: A Case Study. *Journal of Global Information Management*, *12*(4), 50–74. http://dx.doi.org/10.4018/jgim.2004100103 Jiang, J., Klein, G., & Fernandez, W. (2018). From Project Management to Program Management: An Invitation to Investigate Programs Where IT Plays a Significant Role. *Journal of the Association for Information Systems*, *19*(1), 40–57. http://dx.doi.org/10.17705/1jais.00480 Müller, R., Zhai, L., Wang, A., & Shao, J. (2016). A framework for governance of projects: Governmentality, the	• Individual Assignment 5 • Due: Wednesday @ 11:59 p.m. Activities 1. Design a stakeholder communication plan. 2. Construct a graphical/visual communication based on the SMART criteria's finding. 3. Create a graphical illustration to score highlight the lowest ranking project for termination in a dashboard outtake.

Modules	Objectives	Readings	Assessments
		governance structure, and projectification. *International Journal of Project Management*, *34*(6), 957. Sharma, D., Stone, M., & Ekinci, Y. (2009). IT governance and project management: A qualitative study. *Journal of Database Marketing & Customer Strategy Management*, *16*(1), 29–50. http://dx.doi.org/10.1057/dbm.2009.6 Simonsson, M., Johnson, P., & Ekstedt, M. (2010). The Effect of IT Governance Maturity on IT Governance Performance. *Information Systems Management*, *27*(1), 10. Sujitparapitaya, S., Janz, B. D., & Gillenson, M. L. (2003). The contribution of IT governance solutions to the implementation of data warehouse practice: [1]. *Journal of Database Management*, *14*(2), 52–69. Ward, R., Wamsley, G., Schroeder, A., & Robins, D. B. (2000). Network organizational development in the public sector: A case study of the federal emergency management administration (FEMA). *Journal of the American Society for Information Science*, *51*(11), 1018. http://dx.doi.org/10.1002/1097-4571(2000)9999:9999 Wilkin, C. L., & Riddett, J. (2009). IT governance challenges in a large not-for-profit healthcare organization: The role of intranets. *Electronic Commerce Research*, *9*(4), 351–374. http://dx.doi.org/10.1007/s10660-009-9038-0	
Module 6 **Week 6** **Starts: 4/6/2020**	*Course Level* • Plan a program. • Estimate risks inherent to the organization's decision to begin projects and programs *Module Level:* This module will start the team's project series. The course's team aspect will be a three-part (module)	**Readings:** Kodukula (2014) Chapter 13 (pp. 169-176), Chapter 15 (pp. 217-227) & Chapter 16. **Suggested further readings to help answer your challenge located in students' resource page:** Keil, M., Cule, P. E., Lyytinen, K., & Schmidt, R. C. (1998). A framework for identifying software project risks.	• Team Assignment 1: Executive Summary (Part 1 due: Wednesday @ 11:59 p.m.). Activities 1. Students will first analyze the organizations' data or Genematrix organization's

Modules	Objectives	Readings	Assessments
	assignment series that creates the final presentation in module eight. For this module, instructors will discuss: • Inherent risks of outsourcing projects. • Risks involved with planning a program around outsourcing. • Project quality control when outsourcing. • Organizations silo effects on programs.	*Association for Computing Machinery. Communications of the ACM*, *41*(11), 76–83. Li, X., Tripe, D., Malone, C., & Smith, D. (2020). Measuring systemic risk contribution: The leave-one-out z-score method. Finance Research Letters, 36, 101316. Nesbitt, R. W. (2020). Bank Strategy and Innovation Utilizing Technology. The Technological Revolution in Financial Services: How Banks, FinTechs, and Customers Win Together, 382. Longstaff, T. A., Chittister, C., Pethia, R., & Haimes, Y. Y. (2000). Are we forgetting the risks of information technology? Computer, 33(12), 43-51. Tramantano, E., Barnwell, D. C., Bishop, J., Jones, G., & Miller, A. (2015). Developing a Program Map: 2012 London Olympics Construction Program. *Journal of Economic Development, Management, IT, Finance, and Marketing*, *7*(1), 14–29. Wang P. & Johnson C. (2018). Cybersecurity Incident Handling: A Case Study of the Equifax Data Breach. Issues in Information Systems, 19(3), 150-159. https://doi.org/10.48009/3_iis_2018_150-159	program. Students will craft a short introductory marketspace summary for the board of directors utilizing the triple constraints framework on four chosen projects to form their portfolio and new program. 2. In a few paragraphs, students will outline their selection's reasons through any of the momentary analysis methods (EVM, PV, AV, BAC, ROI, or NPV). 3. Students will indicate one project from Kodukul's (2014) Genematrix case study portfolio selected to outsource with financial analysis. 4. Students will discuss the inherent risks involved with outsourcing the program's single unit globally. 5. Students will discuss the risks, communication issues, and quality assurance issues with the outsourced project to the Malaysia software engineering company. 6. As a conclusion, students will discuss how the action can create a silo and what are the inherent risks involved.

Modules	Objectives	Readings	Assessments
Module 7 **Week 7** **Starts: 4/25/2020**	*Course Level* • Plan a program • Estimate risks inherent to the organization's decision to begin projects and programs. *Module Level:* The purpose of this module is to analyze risk and governance issues in IT program planning. Instructors should focus on understanding: • Risk registers, • Governance in IT, • Disaster planning concepts, • IT business continuity. Students will craft their second part of the team's proposal to the board of directors. Students will work again with their team to analyze, interpret, and understand Kodukul's (2014) Genematrix case study portfolio further. Students will synergize their learnings to comprehend the IT projects' inherent risks and governance issues.	Instructor's supplements can be found on the ITEC 8310 Module 7 shared resource webpage: **Readings:** Kodukula (2014) Chapter 13 (pp. 177-183), Chapter 15 (pp. 228-231) & Chapter 17 (pp. 254-258). **Suggested further readings to help answer your challenge located in students' resource page:** Albrecht, J. C., & Spang, K. (2014). Linking the benefits of project management maturity to project complexity: Insights from a multiple case study. *International Journal of Managing Projects in Business*, *7*(2), 285–301. http://dx.doi.org/10.1108/IJMPB-08-2013-0040 Ghareb, M. I. (2018). Information Technology Roles in Crisis Management: A Case Study in Kurdistan Region Government. *International Journal of Computer Engineering and Information Technology*, *10*(5), 71–78. Prasad, S., Woldt, J., Tata, J., & Altay, N. (2019). Application of project management to disaster resilience. *Annals of Operations Research*, *283*(1–2), 561–590. http://dx.doi.org/10.1007/s10479-017-2679-9 Purvis, R. L., Henry, R. M., Leigh, W., & McCray, G. E. (2009). Are You Managing an "Everest" Project? A Case Study Considering Issues for Project Managers Born from Tragedy. *Communications of the Association for Information Systems*, *24*, 44. http://dx.doi.org/10.17705/1CAIS.02444	• Team Assignment 2 Executive Summary (Part 2 due: Wednesday @ 11:59 p.m.). Activities: 1. Analyze the Genematrix organization's outsourced project for sunk costs. 2. Create a risk register for the outsourced project for board members to visually comprehend its constraints. 3. Research global IT governance policy issues to pinpoint any trepidations with outsourcing. 4. Create an illustration and summary for a disaster plan (business continuity). 5. Discuss inherent risks involved with globally outsourcing a project.
Module 3 **Week 8** **Starts: 5/2/2022**	Module 8 focuses on the team's presentation and executive summary program proposal. Students will communicate their	**Suggested further readings to help answer your challenge located in students' resource page:** Chin, P. O., Brown, G. A., & Hu, Q. (2004). The Impact of Mergers & Acquisitions on IT Governance Structures: A	Part 3 due: Sunday @ 11:59 p.m. Team Executive Summary

Modules	Objectives	Readings	Assessments
	solutions to the class utilizing visual storytelling and video-prototyping techniques. The module deliverable is the team's executive summary proposal and a virtual visual communication presentation (short video maximum 10 minutes) supporting their proposed program's portfolio. Students should have an extensive summary and analysis (risk, disaster planning, quality assurance, and control) on each project to support its selection and research considerations to describe project evaluation methods (tangible or intangible) through one or more methods: Earned Value Management (EVM), Planned Value Management (PV), Actual Value (AC), Budget at Completion (BAC), Return on Investment (ROI), or Net Present Value (NPV).	Case Study. *Journal of Global Information Management*, *12*(4), 50–74. http://dx.doi.org/10.4018/jgim.2004100103 Huang, J. C., Newell, S., & S-L, P. (2001). The process of global knowledge integration: A case study of a multinational investment bank's Y2K program. *European Journal of Information Systems*, *10*(3), 161–174. http://dx.doi.org/10.1057/palgrave.ejis.3000402 Sun, X., Zhu, F., & Sun, M. (2018). How to solve the dilemma of balancing between efficiency and flexibility in project-oriented organizations: A comparative multiple case study. *Nankai Business Review International*, *9*(1), 33–58. http://dx.doi.org/10.1108/NBRI-04-2017-0016 Van Steelandt, F. V., & Gelders, L. F. (1979). Financial Control in Project Management: A Case Study. *IEEE Transactions on Engineering Management*, *EM26*(3), 74. Witte, J. (2008). End-User Feedback: A Discussion, Lessons Learned, and Recommendations for Managers of R&D Programs. *Engineering Management Journal: EMJ*, *20*(2), 14–21.	Part 3 due Sunday: 4/30/2022 @ 11:59 p.m. Executive Presentation Part 3 due: 5/3/2022 @ 11:59 p.m. **All activities related to the final project:** 1. Students will first the summarize the team's analysis of the new program for Genematrix board of directors. 2. Students will discuss for the board in the presentation the outsourced project-based on sunk costs reductions projections. 3. Students will create a risk register for the program and highlight the outsourced project for board members to visually comprehend its constraints. The outsourced project should be a separate consideration and graphic illustration. 4. Students will characterize the global IT governance policy issues to pinpoint any trepidations with outsourcing to a

Modules	Objectives	Readings	Assessments
			Malaysian IT software engineering company. 5. Students will interpret their disaster plan (business continuity) illustration. 6. Students will discuss how the action can further decrease inherent risks involved with globally outsourcing a project unit. 7. In conclusion, students will summarize their program's portfolio to sell it to the board and future stakeholders.

Additional Free Classroom Tools:

1. Google Account (YouTube account) (free) - Google
2. Google Blogger Account www.blogger.com
3. Google Sites Account https://sites.google.com
4. Digital Notebook software (free) – Microsoft OneNote 2013/2016
5. Cloud Storage (free) – Microsoft OneDrive
6. Word Processor (free) – Microsoft Word 2010/2013/2016
7. Presentation Software (free) – Microsoft PowerPoint 2010/2013/2016
8. Productivity Suite (free) – Office 365
9. Raster Graphics Editor Cloud-Based (free) – Pixlr
10. Raster Graphics Editor Software (free) – Gimp
11. Vector Graphics Editor Software (free) – Inkscape
12. Animation Software (free) – Gif Maker
13. Graphics Creator (free) – Canva

14. Infographics Creator (free) – Easelly
15. 3D modeling software/3D Animation Software (free) – Blender
16. Audio Editor Software (free) – Audacity
17. Video Editor Software (30-day free trial) – Corel VideoStudio Pro
18. Video Editor Software – VSDC Video Editor
19. Utility software for video editing (free) – VLC Media Player
20. Audio/Video Converter (free – browser based) – CloudConvert2
21. Authoring/Video Editing Software (30-day free trial) – Camtasia
22. Online Video Storage (free) – Screencast
23. File Compression Utility (free) – 7-zip
24. 2D Animation Software (free – browser based) – Powtoon
25. Presentation Software (free - browser based) – Prezi
26. Presentation Software (free – browser based) – Emaze
27. Website Builder (free) – Wix
28. Website Builder (free) – Weebly
29. Website Builder (free) – Linkedin

Syllabus and activities are all subject to change by the instructor or University.