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**School of Business**

**ITX321 Systems Analysis and Design**

3 credits

Fall 2025

Course Term Dates: August 18th to October 11th, 2025

Instructor: Jason Hughes, MBA, MS

Email: Jason.hughes@jefferson.edu

Phone: 215-918-9188

Office Hours: By appointment/as-needed

# Catalog Course Description

This course provides an overview of the system development life cycle (SDLC), including the modification and design process. Students will learn to choose a system development methodology and evaluate the impact on the organization's strategic plan. It emphasizes the factors for effective communication with users and team members and all those associated with development and maintenance of the system.

# Course Delivery Mode Description

Asynchronous Online: Online learning that occurs through virtual methods without live, real-time interaction with your instructor and classmates. Your engagement in sequenced course work occurs on your own time-frame within the requirements and deadlines established in the course syllabus, assignments and schedule.

# Course Objectives and Assessment Map:

# Course Objectives

1. Identify concepts relating to different types of information systems
2. Explain the purpose and activities of the systems development life cycle phases
3. Discuss concepts relating to various models, tools, and techniques used in system analysis and design.
4. Identify and understand system inputs and outputs
5. Utilize data flow diagramming, entity relationship modeling, and state process modeling in user requirement analysis.
6. Compare and contrast conceptual, logical, and physical data models.
7. Design project that follows the systems development life cycle.
8. Discuss the importance of security controls in system design, and explain some of the key aspects of these controls that should be part of the system design process.

# Program Outcomes

1. Demonstrate knowledge of core concepts in key functional business areas
2. Articulate knowledge and application of best practices in leadership and business ethics
3. Apply relevant in-depth knowledge and critical skills in the chosen discipline
4. Develop and deliver effective business presentations and written documents
5. Use information literacy skills to acquire and process the information necessary to inform business-related research

# Course Assessment Mapping and Alignment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Course Objective(s) Met** | **Program Outcome(s) Met** | [**Institutional Learning Goal(s) Met**](https://canvas.jefferson.edu/TJU%20INSTITUTIONAL%20LEARNING%20GOALS.pdf) | **Assessments** |
| 1 | 1  1, 4 | A, E  A, E | C, D, E  C, D | Discussion  Bi-Weekly Assignment |
| 2 | 1, 3 | A, E | C, D, E | Discussion Questions |
| 3 | 2, 3  2, 3 | A, E  A, E | C, D, E  C, D | Discussion Questions  Bi-Weekly Assignment |
| 4 | 4, 5 | A, E | C, D, E | Discussion Questions |
| 5 | 5, 6  5, 6 | A, E  A, E | C, D, E  C, D | Discussion Questions  Bi-Weekly Assignment |
| 6 | 5, 7, 8  5, 7, 8 | A, E  A, E | C, D, E  A, C, D | Discussion Questions  Staged Project Draft #1 |
| 7 | 5, 7, 8  5, 7, 8 | A, E  A, E | C, D, E  A, C, D | Discussion Questions  Bi-Weekly Assignment  Stage Project Draft #2 |
| 8 | 1, 2, 3, 4, 5, 6, 7, 8 | A, E | A, C, D, E | Staged Project/Final Submission |

# Course Materials

# Required Textbook/Readings: All readings will be made available to students via Canvas.

Tilley, S. (2019). *Systems Analysis and Design* (12th ed.). Cengage Learning. ISBN: 978-0-357-11781-1

Rafaels, R. (2019). *Guide to Understanding Security Controls: NIST SP 800-53 Rev 5*. Independently published. ISBN: 9781094901046

# Course Assessments

All assignments have a deadline of 11:59pm EST for the specific due date.

**Online Discussions** – **Due Date (Weekly)**

**Exercises** – **Due Date (Bi-Weekly)**

**Staged Project Draft #1** – **Due Date (Week 6)**

**Staged Project Draft #2 – Due Date (Week 7)**

**Project Presentation – Due Date (Week 8)**

**Staged Project: Final Deliverable – Due Date (Week 8)**

# Weights of Graded Assignments

|  |  |  |
| --- | --- | --- |
| **Assessment** | **Deadline** | **Percentage** |
| Online Discussions | Weekly | 25% |
| Exercises | Bi-Weekly | 25% |
| Staged Project Draft #1 | Week 6 | 10% |
| Staged Project Draft #2 | Week 7 | 10% |
| Project Presentation | Week 8 | 10% |
| Staged Project: Final Deliverable | Week 8 | 20% |
| **Total** | | **100%** |

# Grading Scale:

|  |  |  |  |
| --- | --- | --- | --- |
| **Letter** | **GPA** | **Descriptor** | **Percent** |
| A | 4.0 | Excellent | 93-100 |
| A- | 3.7 |  | 90-92 |
| B+ | 3.3 |  | 87-89 |
| B | 3.0 | Above Average | 83-86 |
| B- | 2.7 |  | 80-82 |
| C+ | 2.3 |  | 77-79 |
| C | 2.0 | Average | 73-76 |
| C- | 1.7 |  | 70-72 |
| D+ | 1.3 |  | 67-69 |
| D | 1.0 | Below Average | 60-66 |
| F | 0.0 | Failure | 0-59 |

# Course Schedule

|  |  |  |
| --- | --- | --- |
| Week/Dates | Topic | Assessments |
| 1  Systems Planning | ***Topic(s):*** Introduction to systems analysis and design, business case analysis, project management.  **Objectives**: 1,3  ***Reading:*** Tilley, Chapters 1,2,3.  ***Lectures***: Chapters 1,2,3  Supplemental materials | Discussion question(s)  Bi-weekly assignment |
| 2  Systems Analysis – Part 1 | ***Topic(s):*** Requirements gathering/engineering, data and process modeling, security concepts  ***Objectives***: 3,4,5,6,8  ***Reading:*** Tilley, Chapters 4,5. Rafaels: pp. 5-19, 379-406  ***Lectures***: Chapters 4,5  Supplemental materials | Discussion question(s) |
| 3  Systems Analysis – Part 2 | ***Topic(s):*** Object modeling, development strategies, selected security controls.  ***Objectives***: 3,4,8  ***Reading:*** Tilley, Chapters 6,7. Rafaels: pp. 22-80, 165-185  ***Lectures***: Chapters 6,7  Supplemental materials | Discussion question(s)  Bi-weekly assignment |
| 4  Systems Design – Part 1 | ***Topic(s):*** User interface design, data design, selected security controls.  ***Objectives***: 3,5,8  ***Reading:*** Tilley, Chapters 8,9. Rafaels, pp. 218-220, 236-242,  ***Lectures***: Chapters 8,9  ***Instructor:*** Supplemental materials | Discussion question(s) |
| 5  Systems Design – Part 2 | ***Topic(s):*** Systems architecture  ***Objectives***: 6,7  ***Reading:*** Tilley, Chapter 10. Rafaels, pp. 266-273, 306-376  ***Lectures***: Chapter 10  ***Instructor:*** Supplemental materials | Discussion question(s)  Bi-weekly assignment |
| 6  Systems Implementation | ***Topic(s):*** Managing systems implementation  ***Objectives***: 7  ***Reading:*** Tilley, Chapter 11.  ***Lectures***: Chapter 11  ***Instructor:*** Supplemental materials | Discussion question(s)  Staged project draft #1 |
| 7  Systems Support and Security | ***Topic(s):*** Systems support security  ***Objectives***: 8  ***Reading:*** Tilley, Chapter 12.  ***Lectures***: Chapter 12  ***Instructor:*** Supplemental video lecture | Discussion question(s)  Bi-weekly assignment  Staged project draft #2 |
| 8  Staged Project/Final | Course wrap up | Staged Project/Final Submission |

Course Policies

**AI Policy**

Artificial intelligence (AI) is an umbrella term for any theory, computer system, or software that is developed to allow machines to perform tasks that normally require human intelligence (e.g. a personal assistant on a smart device such as Alexa, Siri, Hey Google, etc.). Generative Artificial Intelligence (GAI) is a type of AI system capable of generating text, images, or other media in response to prompts (e.g. ChatGPT, Copilot, DALL-E, etc.).

The use of GAI tools is permitted in this course for the following activities:

* Brainstorming and refining your ideas
* Finding information on your topic
* Checking grammar and style (e.g. Grammarly, Packback)

The use of GAI tools is not permitted in this course for the following activities:

* Responding to a discussion prompt (initial post) or responding to a classmate’s post (response post) in a graded discussion forum.
* Answering questions on quizzes, tests, or exams.
* Completing group work that your group has assigned to you.
* Writing a draft of a writing assignment.
* Writing entire sentences, paragraphs, or papers to complete course assignments.

Responsible and ethical use of GAI:

* Keep in mind that your use of GAI tools may hinder your own critical thinking and creative thinking skills.
* You are responsible for the information you use based on a GAI query and that information might be inaccurate, outdated, or proprietary.
* Your use of GAI tools must be properly documented and cited using APA style 7thed. (see [How to cite ChatGPT](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fapastyle.apa.org%2Fblog%2Fhow-to-cite-chatgpt&data=05%7C02%7CSophia.Harris%40jefferson.edu%7C89fbf583dfa5429b546008dc6f620fcc%7C55a89906c710436bbc444c590cb67c4a%7C0%7C0%7C638507714177805138%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=GePefc2nRJ6dAdzRi3sFqz2yu2oHY3DWvtPepfAICmk%3D&reserved=0), for an example) in order to comply with the university’s [Academic Integrity Policy](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.jefferson.edu%2Flife-at-jefferson%2Fhandbooks%2Fpolicies%2Fundergraduate-policies%2Facademic-integrity.html&data=05%7C02%7CSophia.Harris%40jefferson.edu%7C89fbf583dfa5429b546008dc6f620fcc%7C55a89906c710436bbc444c590cb67c4a%7C0%7C0%7C638507714177815756%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=1jHBK1GcyDxdEruLt00%2B8hh31Gy1PLeLIm2YlB0PSdg%3D&reserved=0).
* Any discussion post, assignment, quiz, test, or exam that is found to have used GAI tools in unauthorized ways will be considered a violation of the University’s [Academic Integrity Policy](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.jefferson.edu%2Flife-at-jefferson%2Fhandbooks%2Fpolicies%2Fundergraduate-policies%2Facademic-integrity.html&data=05%7C02%7CSophia.Harris%40jefferson.edu%7C89fbf583dfa5429b546008dc6f620fcc%7C55a89906c710436bbc444c590cb67c4a%7C0%7C0%7C638507714177822323%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=q2TrovuLjYR303Czh6vaDSkDQBq3h1%2FfekBIuz%2BkYMQ%3D&reserved=0). When in doubt about permitted usage, please ask your instructor for guidance.
* Do not submit entire paragraphs/assignments to wordsmithing systems as they will impede your authentic voice. Misuse of these systems to rewrite your original work is also an example of plagiarism and is a violation of the academic integrity policy.

**Attendance** - You are expected to actively participate in class. If you begin to fall behind, contact your instructor immediately. Your advisor can also help if you’re struggling with life issues. **If you do not participate in the first two weeks of class, you will be dropped from your course(s).**

**American Psychological Association (APA) Style** - APA style must be used for all papers and discussion postings. All courses in your program use the most current APA citation style. Getting to know this style early will be a big help. The following resources will help you to master the 7th edition of the APA style guide.

[APA Style In-Text Citations](https://apastyle.apa.org/style-grammar-guidelines/citations)

[APA Style References](https://apastyle.apa.org/style-grammar-guidelines/references)

**Assignment Submission** - All assignments must be completed or submitted through Canvas. Assignments will not be accepted via email.

**Canvas Support** – If you encounter issues with Canvas, please log into the system and find the “Help” button on the button left hand side of the home screen. Canvas offers 24 hour support for all students with available services such as a call-in hotline: (267) 666-6253, Live Chat, Support Guides and Opportunities to Report Issues.

**Communication** - Problems, questions, and concerns should be addressed as soon as possible. Timely communication between you and the instructor is important and expected. It is your responsibility to monitor your jefferson.edu student email account regularly. We cannot accept email from personal accounts. Your instructor will respond to your emails or calls within 48 hours. Assignments and discussions will be graded promptly, typically no later than five days after they are due.

**Copyright** – All information presented in this course, included the syllabus, is copyrighted.  Students are prohibited from sharing any course information with anyone outside of this class.  This includes posting information on Facebook, FlashNotes, CourseHero or other online service; emailing information; or any other form of distribution.

**Help Desk/IT Support** - If you’re having trouble with your Jefferson email, contact our Help Desk at [EFHelpdesk@jefferson.edu](mailto:EFHelpdesk@jefferson.edu) or 215-951-4648.

**Late Work -** Assignments handed in after the deadline are subject to a late penalty.

Within 24 hours of the deadline – 15% deduction

With 48 hours of the deadline – 25% deduction

After 48 hours, no late assignments will be accepted

It is expected that students who are facing a hardship would reach out to the professor to discuss their needs prior to the deadline.Extensions are given at the discretion of the instructor on an emergency basis only. If the student encounters difficulty submitting an assignment or quiz/test via Canvas, the student should email the instructor with a copy of the deliverable noting technological issues to avoid late penalties.

**Professionalism -** College-level work demands dedication, organization and self-management. Part of the expectations of working on your degree is that you will respect your classmates and instructors. Online learning can be more challenging since the tone and meaning of words can be misconstrued. Be thoughtful, kind and respectful to everyone in your classes. Follow these [10 Netiquette Tips for Online Discussions](https://elearningindustry.com/10-netiquette-tips-online-discussions) and you won’t go wrong!

**Student Work** – Jefferson is committed to providing excellent and innovative educational opportunities to its students. To help maintain quality academic offerings and to confirm to professional accreditation requirements where relevant, the University and its programs regularly examine the effectiveness of the curricula, teaching, services and programs the University provides. As deemed appropriate, the University may retain representative examples or copies of student work from this course. This includes, but is not limited to, papers, exams, creative works, surveys, focus group information or portfolios.

**Syllabus Changes -** The instructor reserves the right to make changes to a syllabus based on feedback and student needs; any changes will be communicated via Announcements in Canvas.

University Policies

The University has established graduate level policies that all students are required to follow by nature of enrolling in a graduate program at Jefferson. It is vital that you [review all policies](https://www.jefferson.edu/life-at-jefferson/handbooks/policies/graduate-policies.html) and fully understand their implications as well as the [community standards](https://www.jefferson.edu/life-at-jefferson/handbooks/rights-responsibilities/community-standards.html), which contribute to making our learning environment safe and productive for all.

All University policies and standards of conduct are enforced in this course and the MSOL program wants to specifically draw careful attention to each of the following:

[**Academic Integrity**](https://www.jefferson.edu/life-at-jefferson/handbooks/policies/graduate-policies/academic-integrity.html) - All academic integrity violations, or suspected violations, will be reported according to University guidelines. In the event that the Associate Dean is the instructor of a course, any appeals should be addressed directly to the Dean. For all other courses, appeals will be handled by the Associate Dean.

[**Course Withdraw**](https://www.jefferson.edu/life-at-jefferson/handbooks/policies/graduate-policies/course-withdrawal.html) – students must formally withdraw by the term deadline to earn a “W”. For students who stop attending but do not formally withdraw, the final grade calculation will include zeros for any assignments not submitted.

[**Grading Appeal Protocol**](https://www.jefferson.edu/life-at-jefferson/handbooks/policies/graduate-policies/grade-appeal-protocol.html) – As noted in the policy, appeals will be made in the following order: directly to your instructor, followed by Associate Dean, Academic Affairs and finally the Dean, College of Continuing and Professional Studies. If the Associate Dean is the instructor of the course, appeals will go directly to the Dean.

[**Inclement Weather**](https://www.jefferson.edu/life-at-jefferson/handbooks/policies/graduate-policies/inclement-weather.html) – While the online nature of this course creates opportunities to complete work in inclement weather, students should report power outages or other scenarios that impact the ability to access course materials as soon as they are able to do so.

[**Incomplete Grades**](https://www.jefferson.edu/life-at-jefferson/handbooks/policies/graduate-policies/grading.html) – Provided on a limited basis due to extreme circumstances at the discretion of the instructor. Approval must be sought prior to end of the course and a final contract must be established with deadlines no more than 6 weeks past the end of the term in which the incomplete is being sought.

[**Observation of Holidays**](https://www.jefferson.edu/life-at-jefferson/handbooks/policies/graduate-policies/student-religious-observance-policy.html) – As noted, this policy has no impact on online, asynchronous courses. Plan ahead to ensure you can meet course deadlines. Early submissions are always encouraged.

University Support Services

[**Jefferson Libraries**](http://library.jefferson.edu/) have many helpful resources, guides, and scholarly databases.

[**Grammarly**](https://library.jefferson.edu/librarynews/?p=9545)offers writing support, and all Jefferson students get a free Premium membership. To sign up using your @jefferson email account, visit [this page on our library site](https://library.jefferson.edu/librarynews/?p=9545). Grammarly not only checks over 400 grammar points, but also provides the rules behind the suggestions along with examples. Be sure to turn on the plagiarism checker so you don’t “borrow” someone else’s work by mistake.

[**Academic Success Center**](https://www.jefferson.edu/east-falls/academic-success-center.html) offers tutoring, writing support and more.

# [The Office of Accessibility Services](https://www.jefferson.edu/life-at-jefferson/handbooks/policies/undergraduate-policies/accessibility-services.html) serves those with a documented disability or needing a special accommodation. Students requesting accommodations in the classroom must present a current accommodation letter from the Office of Accessibility Services to the instructor before accommodations may be provided.

Technology Services are available to all students. Contact the Technology help desk at 215-951-4648 with any issues or email them at [helpdesk@philau.edu](mailto:helpdesk@philau.edu)

[**A list of all university services**](https://www.jefferson.edu/university/academic-affairs/schools/student-affairs/student-handbooks/university-services.html) for reference

School of Business Contacts

Numerous policies above mention involvement of the various administrators in key matters. Here is a list of adminisrators involved with these programs and their titles:

Dean, School of Business

Philip Russel, PhD – [Philip.russel@jefferson.edu](mailto:Philip.russel@jefferson.edu)

Associate Dean, Academic Affairs

Allison Keene, EdD – [Allison.keene@jefferson.edu](mailto:Allison.keene@jefferson.edu)

Director, Faculty Affairs

Sharon Harris, MBA – [Sharon.harris@jefferson.edu](mailto:Sharon.harris@jefferson.edu)

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