INFO 4880 - Information Technology Analysis and Design

Fall 2026 Syllabus, Section 01, CRN 41057,

Credit hours: 3

Course Meeting Times

MW 5:30pm-7pm in Meshel Hall 338 (8/24 to 12/12)

Instructor

James Dittrich

Email: jwdittrich@ysu.edu

Public Instructor Information

Instructor Title: Mr.
Instructor Professional Qualifications:

- B.A.S., Computer Information Systems, Youngstown State University, 2004
- M.S. Education (Curriculum & Improvement of Instruction), Youngstown State University, 2007
- Master's of Computing and Information Systems, Youngstown State University, 2012

Instructor Office Location: Tod Hall 135 (University Relations)
Instructor Office Phone: (330) 941-1328

Private Instructor Information

Student Support Hours/Office Hours: before class 4-5pm M-W in my office (Tod 135), or via Discord by appointment

Cell Phone: (330) 715-3342 (please SMS text only, and do not abuse the privilege)

Additional Contact Methods:

- james.dittrich+YSU@gmail.com (submissions)
- Course Discord server

Preferred Contact Method: Discord direct message (DM)

Communication Expectations: Please rename your existing Discord handle to your first name and last initial of your surname/family name in the context of the course Discord Server.

How to Refer to me: Dittrich (DEE-trick), is fine, I am not a Ph.D. and do not require any specific honorifics. Some past students have elected to use "Deetch", which is acceptable.

Course Description

4880. Information Technology Analysis and Design. Information systems integration and modeling. Analysis of dynamic information flow, functional requirements, and system design in theory and practice. Prereq.: CSIS 3722 and either CSIS 3723 or CSIS 3782. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Modern Systems Analysis & Design (10th Edition)	Joseph S. Valacich	9780138180072
Required	The Design of Everyday Things: Revised and Expanded Edition (2013)	Don Norman	9780465050659

The YSU Bookstore provides the Valacich text as a digital rental.

If you prefer a new or used physical hard copy that you will *own indefinitely*, you can search this ISBN number at any bookseller.

O'Reilly Learning (formerly Safari Bookshelf) provides the audiobook version of the Norman book if you are an auditory learner (https://learning.oreilly.com/videos/the-design-of/9781452624129/), but this is the #1 book about User Experience Design by the founder of the Apple UX Lab, and I cannot recommend having a personal physical copy enough.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Additional Course Materials

- Obsidian: https://obsidian.md/. Think of this as not just a note-taking app, but a "second brain" due to its linking and visual graphing ability, as well as a phenomenal amount of customization and addons available.
- Discord: https://discord.com/download. This will be the main way I communicate course information and that you will collaborate on the course projects.

Course Learning Outcomes/Objectives/Goals

.Catalog Description

This course is a capstone course designed to integrate the content of other courses and help students acquire knowledge and skills necessary to advance in an IT career path. Review of 1590, 2600, 2663, 3704, 3714, 3722, 3723 (3782) and 3774. This course will include organization paradigms, system evaluation and planning, interview techniques, questionnaire composition, file design and ERDs, UML/DFDs, Logical Structures (Structured English, Decision Trees, and Decision Tables), Core Business, CSF, RFPs, Story Boards, Business Rules, What-If Analysis, and System Modeling. Database Design and Network Topology will be covered in class. You are expected to consult previous texts or online material to review other subjects.

Learning Objectives

- Develop understanding of value of systems thinking in planning and design of organizational information systems; ability to apply a design to a real-world situation (IT)
- Apply project management methodology to planning and design issues
- Synthesize results of information gathering when analyzing information system needs and designing new systems
- Prepare project proposals and make oral presentations
- Develop ability to articulate relationship between an organization-wide information system and business processes
- Create an Information System Design
- Develop an SDLC (or alternative SA) document and write project proposals
- Understanding of UX design principles informed by Behavioral Psychology

---

General Education, Program, or Degree Learning Outcomes/Objectives

- Plan, Develop, Design IT Projects and Solutions.

How to Succeed in This Course

The most accurate predictor of success in this course is consistent attendance. The lecture portion of this course includes time reserved for questions and answers, and you are encouraged to ask clarifying questions so that you can put the course material into practical use in the projects. Group Projects done asynchronously with Discord using the private channel are often very successful (one such past group had over 1000 messages in the chat).

Technology

To successfully complete this course, you will need consistent access to a Mac, Windows, or Linux desktop or laptop computer. Please let me know on the first day of class if you do not have the appropriate access to technology, the Penguin Plugin Loaner Program is available. I can also recommend some very low-cost options that will be adequate to get you through a 4-year degree program and beyond. We will work together to make sure technology is not a barrier to your success in this course.

The course website and Discord server will be regularly used to share important course information. I do not use nor require the Blackboard LMS in this course. Grades will be distributed in-person during class so that you may ask clarifying questions if you don't receive full credit on any item.

Understanding Early Alerts

In all your classes, your professors can create a "flag" related to your performance in a class. Professors may indicate that you are having difficulty understanding course material, not attending class, missing assignments, etc. These alerts do NOT stay on a permanent record, and they are NOT used in any way as a penalty against you. The alerts are used to help you find a solution that is realistic and helps you succeed.

How to Get Help

YSU is committed to your success. As a student you have access to several resources that may be instrumental in helping you succeed in this course and others. Please do not hesitate to utilize any of these free support services to support your academic success, physical and mental health, and help you navigate your time as a YSU student.

Click here for YSU Student Support Resources

Lectures

Each class day will consist of a lecture section in Meshel 338. We'll iteratively build on your understanding, so it is important to attend regularly and not get behind when concepts are explained. Some class time may be used for short real-world examples or demonstrations, and discussions related to the current topic. The remaining time may be spent on Q&A and getting help with the homework assignments. However, note that you will be expected to do most of the work on the assignments outside of class/lab time. For specific advice on installing and using specific tools on your platform or OS, please see me during office hours and I will do my best to guide you to the correct resources.

Faculty Evaluations

Any course is only as good as the instructor's ability to engage with students and make the material meaningful and relevant to your current and future endeavors. Your insights are valuable; in order to continuously improve and fine tune the learning activities and address the differences in student learning styles, course evaluations are typically made available after Midterm Exams via Web link, watch your student email for further details. I will remind you to take the opportunity to provide feedback at the conclusion of the course.

Honors Contracts

This class is eligible for an honors contract, if you are interested in receiving honors credit for this course, please inquire as soon as possible to discuss possible supplemental projects/papers that will qualify.

Attendance Expectations

Class attendance adheres to the YSU Class Attendance Policy and the Religious Accommodations of Students Policy.

Late Work Submission Policy

Late work submission adheres to the YSU Class Attendance Policy and the Religious Accommodations of Students Policy.

Due Dates and Late Assignments

An assignment (including projects) is late if it is not IN MY POSSESSION (via email) by midnight on the due date. Late assignments may be penalized at 20% per day late (the weekend counts as one day), but no credit will be given for assignments turned in after solutions have been discussed or handed out.

Additional Course Expectations

A positive learning environment involves commitment of both instructor and students in a course. Reciprocal Responsibilities for Undergraduate Students and Instructors was developed jointly with the Student Government Association and YSU Academic Senate to outline mutual responsibilities in the classroom, and our class will follow these guidelines.

Academic Honesty

As outlined in The Student Code of Conduct, all forms of academic dishonesty are prohibited at Youngstown State. This includes plagiarism, the unauthorized use of tools (including Generative AI) or notes in taking tests or completing assignments, fabrication of data or information used for an assignment, working with others without permission from the instructor, and more. A student who is believed to have violated the academic integrity policy will meet with the instructor to discuss the allegations. The student may accept responsibility for the violation and any sanctions selected by the instructor, or they have the right to ask for a hearing before a hearing panel. The full Academic Integrity policy can be found in Article V of The Student Code of Conduct, while further information on University procedures for alleged academic integrity violations can be found in Article V.

Academic honesty is both expected and required. HELPING fellow students is acceptable, and is actually a very good way to learn the material. COPYING is NOT acceptable, laughably easy to detect, and will result in loss of credit for the assignment, and possibly failure of the course. Follow these guidelines:

- If you receive help with an assignment, then you must acknowledge that help in the documentation (your grade will not be affected unless otherwise announced).
- Copying solutions from the Web, especially from notorious “do my work for a bounty” sites, has been detected in the past and dealt with appropriately under this policy. Yes, I too can use online search tools - just as well as anyone in this field, but probably better than most!
- The bottom line: if you are not sure how to approach a problem, or are stuck at some point, PLEASE SEE ME FIRST FOR HELP.

Unless specified otherwise, all written exams are closed book (this includes notes, smartphones, etc.). Any suspected cheating on an exam will result in failure for the course.

I strongly encourage you to discuss any topic and/or share ideas with your peers. That's the way good science ought to happen. As a professional though, you should acknowledge any significant discussions in your homework/projects. However, when the time comes to write the homework, such discussions are no longer appropriate. The solution must be your own inspiration (although you may ask the instructor for help). DO NOT COPY ANOTHER PERSON’S HOMEWORK UNDER ANY CIRCUMSTANCES. To do so is a clear violation of ethical/academic standards and will result in loss of credit for any assignment and possible course failure.

For further information, see the section on Academic Dishonesty in the Undergraduate Bulletin. See also the CSIS Acceptable Use Policy for Lab Standards.

Classroom Etiquette

Your fellow students deserve an environment without disruptions to learning. Examples include:

- Conversing during lecture
- Printing in labs during lectures
- Texting/social media/Web surfing during lecture
- Cell phone use (please change ringtones to silent, and exit the classroom for emergency calls)
- Eating or drinking (prohibited in our labs)
- Exhibiting signs you are sick (please stay home for our collective well-being)

If you engage in these activities repetitively, you will be kindly asked to leave.

On the other hand, asking questions during lectures is very strongly encouraged. I frequently pause to confirm that everyone understands the concepts being discussed. If you are confused about a topic, chances are that many other people are as well! If I do not provide an opportune time for you to ask your question, please feel free to interrupt me before I continue.

Incomplete Grades

Incomplete grades are strongly discouraged. However, an incomplete grade may be assigned under the following conditions:

- The student must request in writing that an incomplete grade be assigned.
- The student's previous work in the course must have been satisfactory.
- The reason(s) must be beyond the student's control, and deemed justifiable by the instructor.

Insufficient time is NOT a justification for an incomplete. Also note that all incompletes must be made up within two months; otherwise, they automatically revert to an F.

Airborne Pathogen Safety Statement

If you are feeling unwell, I strongly encourage you to stay home, and get notes from a classmate. If you are observably exhibiting symptoms of airborne viruses (such as repeated coughing and/or sneezing), out of consideration for your peers, I will kindly ask you to leave class and go home to recover. I strongly recommend visiting Wick Primary Care, as many services are included in your tuition. As attendance is not strictly mandatory, I do not require a physician's note, except in cases where an exam or project deadline would be missed without making a prior arrangement to fulfill these obligations. As long as I have prior notice, that will not be necessary – and you will find that I am quite reasonable and flexible with scheduling, so that you can fulfill the requirements of the course.

Artificial Intelligence Policy Statement

The design of Information Systems, and the art and science of UX in general, is an inherently creative activity. Reliance on Generative AI tools is detrimental because the LLM is just regurgitating examples it has already been trained on. This is the opposite of innovation and cannot help you push into new and better paradigms.

Some AI Use Allowed: Acceptable and Unacceptable Uses of AI

The responsible use of generative artificial intelligence is permitted in this course, within the parameters established in the *YSU Student Code of Conduct*. You are expected to complete each assignment without substantive assistance from others (subject to faculty discretion), including automated tools. You are responsible for the information you submit based on an AI query (for instance, that it does not violate intellectual property laws, or contain misinformation or unethical content). Your use of AI tools must be properly cited. For example, *[Insert citation style for your discipline. See these resources for common citation formats]*. Any use of generative AI tools without attribution may be considered a violation of the *YSU Code of Conduct*. When in doubt about permitted usage, please ask for clarification.

The use of generative AI tools such as ChatGPT is permitted in this course for the following activities (see a full idea list here):

- Brainstorming and refining your ideas:
- Fine tuning your research questions;
- Finding information on your topic (be sure to check the original source material for correctness, as AIs tend to hallucinate and apologize after the fact when called out);
- Clarify unclear course concepts;
- Drafting an outline to organize your thoughts
- Tightening slide text; and
- Checking grammar and style.

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

- Impersonating you in classroom contexts, such as by using the tool to compose discussion board prompts assigned to you or content that you put into an online chat.
- Completing group work that your group has assigned to you, unless it is mutually agreed upon that you may utilize the tool.
- Writing a draft of a writing assignment.
- Writing entire sentences, paragraphs or papers to complete class assignments.

Assignments/Assessments

Discussion (10%)

Discussion and Participation 10

note that you cannot *participate* if you do not *attend* regularly.

Quiz (16%)

Quizzes **16**

Presentation (54%)

Projects **24**

4 Projects (1 individual, 3 group) to apply what you have learned.

Term Project **30**

All students are required to develop and submit the final project to pass the course.

Exam (20%)

Midterm Exam **20**

Grading and Grading Scale

YSU courses follow the YSU Grading System. The course may have additional, course-specific grading policies.

Grade	Value
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Less than 60%

University Policies

University policies can be found online and provide you guidance on your rights as a student in this course. The links below take you directly to a specific policy. Should you have any questions about a policy, please do not hesitate to contact me using the information at the top of the syllabus.

- Statement of Non-Discrimination from the University
- Academic Integrity/Honesty
- Student Accessibility
- Digital Accessibility
- Incomplete Grade Policy
- YSU Class Attendance Policy
- Religious Accommodation of Students

Attendance Expectations

Students are expected to attend all class sessions and participate in class activities. Attendance will be periodically recorded for administrative purposes and will count toward participation (10% of the overall final grade). Missing class is not an acceptable excuse for failure to complete required material. If you are going to miss a group presentation due to illness or other extenuating circumstance, please be courteous and inform both me and the other members of the group at the earliest possible convenience via Discord message and/or SMS text.

The YSU Attendance Policy addresses excused absences for participation in university-sponsored events, government-related activities, religious observances, death of a family member, and documented personal illness.

Strictly speaking, class attendance is optional, except for students who are receiving VA benefits, or in situations (such as group meetings) where your absence would be detrimental to other students in a group. However, missing class is not an acceptable excuse for failure to complete required material on time. Every lecture will cover material related to assignments and exams, and in general the grades in Information Technology classes are directly related to the ability to have meaningful dialogue with the instructor. Material that is presented in class will not be covered again outside of class – if you miss class, it is up to you to find out what was covered and to get the notes from someone else. Historically, the best predictor for success in this course is your attendance.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Ch. 1 The Systems Development Environment	Syllabus, Review of Concepts, Introduction to Systems Analysis	
8/31	Ch. 2 The Origins of Software	FOSS, The Agile Manifesto	
9/7	Ch. 3 Managing the Information Systems Project	9/7: Labor Day - YSU CLOSED Agile Methodologies: Scrum, XP; Human Factors Analysis	Project 1 assigned
9/14	Ch. 4 Identifying and Selecting Systems Development Projects		
9/21	Ch. 5 Initiating and Planning Systems Development Projects		Project 1 due; Project 2 assigned
9/28	Ch. 6 Determining System Requirements	Accesibility Compliance, Government Contracting, Liability	
10/5	Ch. 7 Structuring System Process Requirements		Project 2 due; Project 3 assigned
10/12	Ch. 8 Structuring System Process Requirements		Midterm Exam Wednesday, Oct. 14
10/19	Ch. 9 Designing Databases		
10/26	Ch. 10 Designing Forms and Reports		Project 3 due
11/2	Ch. 11 Designing Interfaces and Dialogues		Project 4 assigned
11/9	Ch. 12 System Implementation and Maintenance	Runbooks 11/11: Veteran's Day - YSU CLOSED	
11/16	The Design of Everyday Things (Norman) preface, Ch. 1	UX Design	
11/23	The Design of Everyday Things (Norman) preface, Ch. 2-3	UX Design	Project 4 due
11/30	The Design of Everyday Things (Norman) Ch 4-5, selected topics	UX Design	
12/7		Final Project Presentations	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.