



**NORTHWEST**  
MISSOURI STATE UNIVERSITY  
MARYVILLE | KANSAS CITY

**School of Computer Science and Information Systems**  
**44-691-04 Graduate Directed Project-I (3 hours)**  
**Fall 2023**

**Instructor:** Mark Chai **Email:** schai@nwmissouri.edu  
**Office hours:** MWF 3:00-5:00PM, T 1:00-3:00PM  
**Office:** CH 2315  
**Phone:** 660-562-1600

**Prerequisites:** 15 hours toward the M.S. in Applied Computer Science and approval by graduate advisor.

**Recommended textbook:** No textbook is required. All the material will be posted in Canvas.

**Course description:** Software development practicum designed to integrate computer-related skills into an intensive project environment. Students enroll in this course for two consecutive semesters, for a total of six credit hours.

**Student learning outcomes:**

**Assessment methods:**

An ability to communicate effectively with a range of audiences	Workshops, client meetings, stand-up meetings, project presentations.
An ability to use current techniques, skills, and tools necessary for computing practice.	Stand up meetings, client meetings, team meetings, and weekly progress.
An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	Workshops, project presentations, weekly progress, client meetings, documentation and all other project artifacts
An ability to foster diversity, equity, and inclusion.	Project presentation, class participation, and workshops.
An ability to function effectively on teams to accomplish a common goal.	Project presentation, workshops, team meetings, client meetings, stand-up meetings and class participation.
Understand and develop leadership traits including accountability, integrity, and commitment.	Project presentation, client meetings, attendance, punctuality and academic integrity.

In addition, after successfully completing this course student will be able to:

1. Gain experience working on a “real world” project by following software development lifecycle (SDLC)
2. Use software development tools and techniques including, but not limited to:

- Version control
  - Report generation tools
  - Defect tracking system
  - Data services
  - Server management techniques
  - Build tools
3. Install the necessary software required to develop the project
  4. Gather requirements from client for the project
  5. Design user interfaces for the project and performs usability testing for defects
  6. Demonstrate knowledge of database
    - Design and create database on the server
    - Store and retrieve data successfully
  7. Use agile methodologies to plan and monitor projects
    - the core practices of agile methodologies
    - the importance of value-driven delivery and continuous customer and user feedback
    - the implementation of Scrum
  8. Improve soft skills including, but not limited to:
    - Communication skills
    - Teamwork and collaboration
    - Conflict resolution
    - Adaptable to software technologies

**Instructional methods:** Class time will be used in four main ways:

- Lectures covering software development lifecycle and tools
- Workshop presentations
- Mid-term and final presentations
- Group discussion and teamwork

**Graded course requirements:**

Components	Points
Team meetings (40)	40 points
Client meetings (40)	40 points
Professional interaction (4 @each 3 points)	12 points
Weekly progress (14 @each 2 points)	28 points
Workshops	30 points
Mid-term I presentation	15 points
Mid-term II presentation	15 points
Final presentation	30 points
Project components (Final project documentation, source code with comments, and other required artifacts)	20 points
Projection contribution	30 points
Attendance	20 points
<b>Total</b>	<b>280 points</b>

**Grading scale:**

Percent Range	Grade
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90-100%	A
>= 80% and < 90%	B
>= 70% and < 80%	C
>= 60% and < 70%	D
Below 60%	F

**Grading policy:** Grades are posted in the online gradebook. You are responsible for checking the gradebook at least once a week to ensure that your grades are properly posted. If there is an error in grading, you must bring that to the attention of the class assistant or instructor *within two weeks of the time the grade is posted*.

**Course outline/major topics studied:**

The following is a tentative schedule and is subject to change. For exact information, including important dates, check the course website. Students will develop a real-world project. The project will be broadly divided into 14 Tasks.

Week	Activity
Week 1	Task-1
Week 2	Task-2
Week 3	Task-3
week 4	Task-4
Week 5	Task-5
Week 6	Task-6
week 7	Task-7
week 8	Task-8
Week 9	Task-9
Week 10	Task-10
week 11	Task-11
Week 12	Task-12
Week 13	Task-13
Week 14	Task-14

**Note:** Course schedule is subject to change with instructor notification and students will be responsible for abiding by these changes.

**Announcements and email** Announcements are communicated via the Announcements page on the course website and your Northwest Missouri State University (Northwest) email account. It is your responsibility to check each of these sources daily. Note that you must use your Northwest email account on the Northwest Online site. All emails in this class will be sent to your Northwest address.

**Professionalism** Students are expected to behave in a professional manner in their dealings with each other, the class assistant, and the instructor. Emails should be politely written, use proper grammar, and follow the rules of capitalization. Emails **must** include the course number (44-691), section number (04)

and student ID number in the subject line in each email communication. For security reasons, I never open emails that do not include an appropriate entry for the subject. Emailed queries on material found in the Canvas course areas will NOT be answered.

**Due Dates** Each assigned, graded activity will have a due date posted. Late submissions are not allowed and will receive a grade of 0.

**Attendance** This class will have many in-class activities, so attendance is mandatory. Some in-class exercises may have points associated with them and may not be announced in advance. A student who misses such an exercise due to an unexcused absence will not be allowed to make it up and will receive a zero. For an absence to be excused, written documentation must be provided and approved by the instructor abided by the MS-ACS attendance procedure. Excused absences include attendance at a university-sponsored event (documented with an excuse signed by the university sponsor prior to the event) or by circumstances considered adequately extenuating by the course instructor.

**Final exams:** If an emergency occurs that prevents the administration of a course scheduled final examination, the final course grades will be calculated based on the work in the course completed to that point in time and the faculty member's considered judgment. Final exams will not be rescheduled, and a grade of "I" will not be given as a result of an institutional cancellation of a final examination. This final exam policy does not apply to online courses.

**Administrative drop:** An instructor may request the Office of the Registrar delete a student from a course roster if the student has not met the prerequisite for the course as stated in the catalog, or as a result of non-attendance in the course.

**Academic Administrative withdrawal:** When it is in the best interest of Northwest Missouri State University for a student to withdraw, a student will be given a W, put on administrative hold, and given notice that they are about to be withdrawn. This action will result in removal of all credits associated with courses that have yet to be completed in the semester in question and the student will be administratively withdrawn from the University. An Administrative Withdrawal does not affect the student's grade point average. Please refer to Northwest Missouri State University's Academic Administrative Withdrawal Policy at:  
<https://www.nwmissouri.edu/policies/academics/Adding-Dropping-Withdrawals.pdf>

**University communications:** Students are expected to use their Northwest student email account for any electronic correspondence within the university. Students are also strongly advised to check their email and CatPAWS accounts on a regular basis.

**Academic integrity policy:** The students, faculty, and staff at Northwest endeavor to sustain an environment that values honesty in academic work, that acknowledges the authorized aid provided by and intellectual contributions of others, and that enables equitable student evaluation. Please refer to Northwest Missouri State University's Academic Integrity Policy at  
<http://www.nwmissouri.edu/policies/academics/Academic-Integrity.pdf>

**Learning or Living Accommodations Request Process:** Northwest Missouri State University complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 [ADA] and the ADA Amendments Act of 2008 [ADAAA]. If a student has a documented disability that qualifies

under the ADA/ADAAA and requests accommodations, they should review the Accessibility and Accommodations webpage at <https://www.nwmissouri.edu/titleixequity/accessibility/index.htm> for guidance, including the accommodations application and supporting documentation requirements. Contact [ada@nwmissouri.edu](mailto:ada@nwmissouri.edu) or 660.562.1873 for further assistance. For the university policy on disability accommodation refer to <http://www.nwmissouri.edu/policies/student/Disability-Accommodation.pdf>

**Non-discrimination and anti-harassment policy:** Northwest Missouri State University is committed to maintaining an environment for all faculty, staff, students, and third parties that is free of illegal discrimination and harassment. Please refer to the Non-Discrimination and Anti-Harassment Policy at <https://www.nwmissouri.edu/TitleIXEquity/titlevi/>

**Family Education Rights and Privacy Act (FERPA) policy:** Family Educational Rights and Privacy Act of 1974, as amended (commonly known as the Buckley Amendment), is a federal law which provides that colleges and universities will maintain the confidentiality of student education records. Please refer to the Family Educational Rights and Privacy Act (FERPA) Policy at <http://www.nwmissouri.edu/policies/academics/Family-Educational-Rights-and-Privacy-Act.pdf>

**Behavior and Wellness:** Northwest focuses on student success—every student, every day. The Wellness Center, 660.562.1348, offers free counseling for students coping with depression, anxiety, alcohol or drug misuse, relationships, and other emotional, social, and academic stressors. In addition, faculty, staff, and students who are concerned with student wellbeing can report their concerns, including anonymously, to the Behavioral Intervention Team, so that the student can be offered relevant support, at this link: [Concerning Behavior Reporting Form](#). If you are concerned about the immediate safety of a student, please call the University Police, who have specialized training in intervention, at 660.562.1254.

**Disclaimer:** Course schedule is subject to change and you will be responsible for abiding by any such changes. Your instructor will notify you of any changes.