



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

**School of Computer Science and Information Systems**  
**44-691 Computer Science Graduate Directed Project-I (3 hrs)**  
**Spring 2022**

**Instructor:** Dr. Ajay Bandi

**Email:** [ajay@nwmissouri.edu](mailto:ajay@nwmissouri.edu)

**Office hours:** Office hours: M (1:00 PM to 5:00 PM) and W (2:00 PM to 5 PM)

**Office:** CH 2250

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

**Textbook and supplementary materials:** No textbook is required; all the materials will be posted in Northwest Online.

**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 six credit hours.

**Learning Outcomes:**

<b>Student learning outcomes</b>	<b>Assessment methods</b>
1. An ability to communicate effectively with a range of audiences	Grades on individual presentation, team presentation, client meetings, stand-up meetings, mid-term and final presentations.
2. An ability to use current techniques, skills, and tools necessary for computing practice.	Grades on stand up meetings, client meetings, team meetings, and weekly progress.
3. An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	Grades on workshops, mid-term presentations, final presentations, weekly progress, client meetings, documentation and all other project artifacts.
4. An ability to foster diversity, equity, and inclusion.	Scores on team presentation and class participation, final presentation, and workshops.
5. An ability to function effectively on teams to accomplish a common goal.	Team and individual scores on final project presentation, workshops, team meetings, client meetings, stand-up meetings and class participation.
6. Understand and develop leadership traits including accountability, integrity, and commitment.	Team and individual scores on 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:** Instructional methods include lectures, lecture demonstration, class discussions, class projects, client meetings, guest lectures, learner presentations and workshops, team presentations, and collaborative development.

**Graded course requirements:**

Components	Points
Weekly progress (SDLC/DSLDC processes)	40
Mid-term presentation	20
Final presentation	20
Project components (Final project documentation, source code with comments, and other required artifacts)	20
<b>Total</b>	<b>100</b>

**Grading scale:**

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

**Course outline/major topics studied:**

Week	Activity
Week 1 (12 <sup>th</sup> Jan – 16 <sup>th</sup> Jan)	Project overview and requirements documented. Project work and weekly progress update.
Week 2 (18 <sup>th</sup> Jan – 23 <sup>rd</sup> Jan)	Project work and weekly progress update.
Week 3 (24 <sup>th</sup> Jan – 30 <sup>th</sup> Jan)	Project work and weekly progress update.
Week 4 (31 <sup>st</sup> Jan – 6 <sup>th</sup> Feb)	Project work and weekly progress update.
Week 5 (7 <sup>th</sup> Feb – 13 <sup>th</sup> Feb)	Project work and weekly progress update.
Week 6 (14 <sup>th</sup> Feb – 20 <sup>th</sup> Feb)	Project work and weekly progress update.
Week 7 (21 <sup>st</sup> Feb – 27 <sup>th</sup> Feb) [No class on 25 <sup>th</sup> Feb]	Project work and weekly progress update.
Week 8 (28 <sup>th</sup> Feb – 6 <sup>th</sup> Mar)	Mid-term presentations.
Week 9	Spring Break
Week 10 (14 <sup>th</sup> Mar – 20 <sup>th</sup> Mar)	Project work and weekly progress update.
Week 11 (21 <sup>st</sup> Mar – 27 <sup>th</sup> Mar)	Project work and weekly progress update.
Week 12 (28 <sup>th</sup> Mar – 3 <sup>rd</sup> Apr)	Project work and weekly progress update.
Week 13 (4 <sup>th</sup> Apr – 10 <sup>th</sup> Apr)	Project work and weekly progress update.
Week 14 (11 <sup>th</sup> Apr – 17 <sup>th</sup> Apr)	Project work and weekly progress update.
Week 15 (18 <sup>th</sup> Apr – 24 <sup>th</sup> Apr)	Project work and weekly progress update.
Week 16 (25 <sup>th</sup> Apr – 1 <sup>st</sup> May)	Project work and weekly progress update.
Finals Week (3 <sup>rd</sup> May 9:40 AM - 11:40AM)	Final presentation

**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.

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

**Academic Calendar:** <http://www.nwmissouri.edu/academics/calendar.htm>

**Final Exam Schedule:** <http://www.nwmissouri.edu/registrar/finals.htm>

**Attendance:** This course will have many in-class activities, so attendance is strongly suggested. 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. It is the responsibility of the student to promptly notify his or her instructor when unable to attend class. Please refer to the university policy on attendance at <https://www.nwmissouri.edu/policies/academics/Attendance.pdf>

**Late Submission Policy:** Each assigned, graded activity will have a due date posted and are expected to be completed by due date. All the submissions must be submitted through Northwest Online. Any submission up to 24 hours after the due date will be considered as a late submission. The score for late submissions will have 10% of the maximum score deducted from the actual points.

**In-class Activities:** There may sometimes be in class activities in class, usually worth five points or less. These activities will not always be announced in advance. They will usually be given at any point of the class time. If you arrive late or miss an activity due to an unexcused absence, you will receive a grade of zero on the activity. Different sections may have activities on different days.

**Arriving late for class:** Students are expected to be on time for each class period.

**Final exams:** If an emergency occurs that prevents the administration of a course scheduled a 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. **The final exam time for this course is on Tuesday, May, 3 from 9:40 am to 11:40 am in your regular classroom.** <https://www.nwmissouri.edu/registrar/finals.htm>

**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.

**University communications:** Any course related announcements will be communicated via the **Announcements** page on the course website in Northwest Online or your Northwest e-mail

account. 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 on a regular basis. E-mails must include the course number (44-691) in the subject line. For security reasons, e-mails that do not include an appropriate entry for the subject or unsigned e-mails will not be replied.

**Professionalism:** Students are expected to behave in a professional manner in their dealings with each other, the teaching assistant, and the instructor. E-mails should be politely written, use proper grammar, and follow the rules of capitalization.

**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 are free of illegal discrimination and harassment. Please refer to the Non-Discrimination and Anti-Harassment Policy at <http://www.nwmissouri.edu/diversity/titlevi.htm>

**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>.

**Covid 19 Classroom Mitigation:**

Northwest is committed to the health and safety of the University community and has therefore adopted COVID-19 mitigation policies. Every student must wear a face covering (such as a cloth facemask, bandana, scarf, neck gaiter, or medical mask) over their nose and mouth at all times in all academic building spaces, including classrooms (unless directed not to by the instructor), offices, hallways, and restrooms. Face shields may be worn in addition to, but not in place of, a face covering. Students without face coverings will not be allowed in the classroom until they comply with expectations. Students must also follow directions regarding entries, exits and furniture, and maintain at least 6 feet of social distancing whenever possible. Northwest further

asks all students to practice good hygiene and not enter academic buildings or attend face-to-face classes when they feel sick or have been instructed to quarantine/isolate; students who miss class should communicate with their instructors. Students who do not comply with these requirements will be subject to standard disciplinary procedures according to the Northwest Student Code of Conduct (i.e. verbal and written warnings followed by a hearing, if necessary). We thank you for doing your part to maintain our learning environment and to protect the health of fellow Bearcats.

### **Quarantine checklist:**

YOUR to do List:

- Call 911 if you experience difficulty breathing or a change in your level of consciousness.
- Contact Wellness Services at 660.215.8573 with questions. You may text or call between 7 a.m. and 7 p.m. If you have an emergency outside of these hours, contact UPD at 660.562.1254.
- Notify all of your instructors of your absence and predicted date of return. They will assist you in your coursework by providing information on their strategies for distance learning. Please ensure that you have your laptop, notes, textbooks, and other necessary course materials when you enter into quarantine. Lack of engagement in your coursework during quarantine will likely result in lower grades or failure. When communicating with your instructors, you may provide them with the reason you cannot be in the classroom, but you are not required to do so.
- Stay away from all people.
- You must talk with a Wellness Services staff member every few days, either by phone, text, Zoom or Skype. If you develop COVID-19 symptoms, you MUST notify Wellness Services immediately. It is important for your wellbeing that Northwest maintains contact with you. We want to know you are doing okay, answer any questions you have, check for symptoms and assist with your needs.

**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.