**School of Computer Science and Information Systems**

**44643-02/03 Mobile Computing - iOS 3 credit hours**

**Fall 2023**

|  |  |  |  |
| --- | --- | --- | --- |
| Instructor: Dr. Chandra Mouli Kotteti | | | Email: chandra@nwmissouri.edu |
| Office Hours: | Tuesday | 08:00 am - 9:30 am  1:30 pm - 03:30 pm | **Office:** CH2145 |
| Thursday | 08:00 am - 9:30 am  12:30 pm - 1:30 pm |
| Friday | 10:00 am – 11:00 am |
| and by appointment | | **Phone:** (660) 562-1764 |

**Prerequisites:** CSIS 44242 with a grade of C or better, or CSIS 44542 with a grade of B or better.

**Textbook and supplementary materials:** All the materials will be posted on Northwest Online**.**

**Course description:** Students will learn the intricacies of mobile computing development with an emphasis on the iOS platform.

**Student learning outcomes: Assessment methods:**

|  |  |
| --- | --- |
| * Learn swift programming basics. * Create a project in the Xcode. * Design and implement apps in UIKit framework adhering to the coding standards. * Understanding the key components of the Foundation and UIKit frameworks. * Effectively debug and resolve the errors in an application. * Design responsive UI using stacks, constraints, auto layout. * Learn importing of third-party packages and implementing protocols and delegates. * Create animations, use media components, and complex controllers (list view controller, table view controller, etc.) * Retrieving and using data from third party API’s. * Building apps using Core Data. | Assignments, quizzes, final project, research article, and class participation. |

**Instructional methods:** Instructional methods may include lectures, practical demonstrations, classroom practice, class projects, individual projects, and interactive question and answer sessions.

**Graded course requirements:**

|  |  |
| --- | --- |
| **Category** | **Percent** |
| Quizzes [3-6] | 10% |
| Assignments | 25% |
| Research article | 10% |
| Final project | 20% |
| 2 midterm exams | 30% |
| Class participation/Miscellaneous | 5% |
| **Total** | 100% |

If students have any questions/concerns regarding the grades for their course objectives such as assignments, quizzes, engagements, and midterm exams there will be a week time given after the grades are posted to ask the faculty about their grades and request re-evaluation. After the allotted time passed, no further requests about their grades are considered.

**Grading scale:**

|  |  |
| --- | --- |
| **Undergraduate Credit (44443)** | |
| **Percent Range** | **Grade** |
| **88-100%** | **A** |
| **>= 78% and < 88%** | **B** |
| **>= 68% and < 78%** | **C** |
| **>= 58% and < 68%** | **D** |
| **below 58%** | **F** |

|  |  |
| --- | --- |
| **Graduate Credit (44643)** | |
| **Percent Range** | **Grade** |
| **90-100%** | **A** |
| **>= 80% and < 90%** | **B** |
| **>= 70% and < 80%** | **C** |
| **>= 60% and < 70%** | **D** |
| **below 60%** | **F** |

|  |  |  |
| --- | --- | --- |
| Week | Topic | Assignment |
| 1 | Course orientation, introduction to iOS, project teams and installations  The Basics of Swift Programming | Student Agreement ProjectMilestone01  ResearchArticle |
| 2 | Basic Operators in Swift  Control Flow  Strings and Characters |  |
| 3 | Intro to Xcode IDE  Auto Layout | Assignment01 |
| 4 | Optionals in Swift  Collection Types |  |
| 5 | Demo of Image Views | Assignment02 |
| 6 | **Exam01**  Functions in Swift | ProjectMilestone02 |
| 7 | Closures & Enumerations in Swift  Structs and Classes  Initialization |  |
| 8 | iOS Coordinate System and Core Graphics  iOS Animations | Assignment03 |
| 9 | Multiple MVCs & Navigation |  |
| 10 | Protocols  Delegation Demo | ProjectMilestone03  ProjectMilestone04 |
| 11 | Demo of Table Views and APIs | Assignment04 |
| 12 | **Exam02** | Assignment05 |
| Demo of Collection Views |
| 13 | Special iOS framework |  |
| 14 | **Thanksgiving break** | |
| 15 | **Final project preparations** | |
| Finals | Section 44643-02 | Tuesday, December 5  9:40 am - 11:40 am |
| Section 44643-03 | Monday, December 4  2:00 pm - 4:00 pm |

**Course outline/major topics studied:**

**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 (44-643) and section number (02 or 03) in the subject line. For security reasons, I never open emails that do not include an appropriate entry for the subject.

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

**Academic Calendar**:  [*http://www.nwmissouri.edu/academics/calendar.htm*](http://www.nwmissouri.edu/academics/calendar.htm)

**Final Exam Schedule**: [*http://www.nwmissouri.edu/registrar/finals.htm*](http://www.nwmissouri.edu/registrar/finals.htm)

**Attendance:** Students are expected to attend all classes as specified in the course syllabi for each course. Class participation points may be awarded to students. It is the responsibility of the student to promptly notify his or her instructor when unable to attend class. Excused absences are not counted against student’s attendance points. Please refer to the university policy on attendance at <https://www.nwmissouri.edu/policies/academics/Attendance.pdf>

**Arriving late for class:** Students are expected to be on time for each class period in-person. Attendance will be taken exactly when the class starts. Late arrivals get partial credit for that class’ attendance points.

**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](https://www.nwmissouri.edu/titleixequity/accessibility/index.htm%20) for guidance, including the accommodations application and supporting documentation requirements. Contact 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](https://cm.maxient.com/reportingform.php?NorthwestMOStateUniv&layout_id=5). 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.

**Rounding of final grades:** I will, in certain circumstances, “bump up” your grade to the next level.

These are the circumstances:

1. I usually prefer to round up to the next number using two decimal places, i.e., 79.68 rounds up to 80, but 59.46 rounds down to 59.
2. If your final grade number rounds to (59, 69, 79, 89), I will consider “bumping up” your grade only if ALL of the following circumstances are met:
   1. You have not lost ANY attendance points.
   2. You have maintained excellent student conduct, including but not limited to maintaining academic integrity.
   3. You have completed ANY and ALL projects / assignments. (Projects and assignments are, but not limited to quizzes, exams, in class projects, etc.).
   4. You present your “case” to me as a polite request, rather than a demand.
   5. You must meet me face-to-face if you have any concern regarding your final grade. Students travelling immediately after their final exam make sure that you can meet me in-person.

These are absolutely and positively the only circumstances in which I will adjust a grade! I will NOT raise a grade by more than one percent! This is my policy, and I am sticking to it. If you email me regarding this but have not met the criteria above, I will ignore your message. Final grades are usually due to the registrar by 10am on the Monday after final exams. After this date and time, I will only change a grade due to a mistake on my part.

**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.