Mobile Application Development  
CS399  
Fall 2017 Course Syllabus  

Northern Arizona University • College of Engineering, Forestry, and Natural Sciences  
School of Informatics, Computing, and Cyber Systems  

Course Information  

Catalog Description: New class to explore theory and practice in design and construction of modern graphical user interfaces using mobile application development.  

Broad Topics:  
1. Gain expertise in graphical user interface (GUI) software programming  
2. Become familiar with Android mobile app development environment  

Prerequisites: CS 249 (Data Structures)  
Co-requisites: None  
Skill Level: Advanced  
Required Text: None  
Supplemental Readings: TBA  

Credit Hours: 3  
Meeting Times: Mon & Wed, 5:30PM to 6:45PM, Engr. Bldg. 69, Room 218  
Final Exam: Mon. Dec. 11, 2017 --- 5:30PM to 7:30PM  
Course Websites:  
http://www.cefns.nau.edu/~smj93/cs399/  
http://bblearn.nau.edu  

All assignments should be submitted electronically to Blackboard by the due date. Individual assignments will be clearly specified. Group assignment must contain all member names to receive credit. All group members submit a copy of the assignment into BbLearn.  

Instructor Information  

Instructor: Steven M. Jacobs, Lecturer  
School of Informatics, Computing, and Cyber Systems
Office Hours: Office is Engineering Bldg. 69, Rm 324C
See on-line schedule at Prof. Jacobs’ faculty page:
http://cefns.nau.edu/~smj93/ (click on “schedule”)

Email: Steven [dot] Jacobs [at] nau [dot] edu
Phone: Please email.
NAU Address: Box 15600, Flagstaff, AZ 86011-5600

Course Structure
This offering of CS399 will consist of in-class lectures, homework assignments revolving around readings, individual and team programming projects, and delivery of working software.

Learning Outcomes
1) Explore theory and practice in design and construction of modern graphical user interfaces (GUI)
2) Gain expertise in GUI software design, development and test
3) Become familiar with Android mobile app development environment
4) Learn about new tools and techniques available on the web for mobile app development

Assessment of Student Learning Outcomes
Methods of assessment include: Class participation and attendance, project deliverables, and project demonstrations.

Grading System

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Grade weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework, review quizzes (individual)</td>
<td>25%</td>
</tr>
<tr>
<td>Class participation (including class exercise(s) and attendance) (individual)</td>
<td>10%</td>
</tr>
<tr>
<td>Projects</td>
<td>25%</td>
</tr>
<tr>
<td>Midterm</td>
<td>20%</td>
</tr>
<tr>
<td>Final exam</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Your class grade is based on the standard scale of points earned: 90%=A, 80%=B, 70%=C, 60%=D, below 60%=F.
No grades are curved or dropped, though there may be opportunities for extra credit. *Content and amount of homework and project assignments may vary based on class progress.*

Assignments are due on-line on the due date/time listed in BbLearn. Regrade requests of any assignment question or test may include regrade of entire test or homework. Review the grading comments in BbLearn for any feedback on your work. You have 2 weeks to question a grade once it is posted in BbLearn. It is your job to check your grades.

**Pre-requisites and dropping the course**

If you have not completed the prerequisites for a course as stated in the academic catalog or if you are absent from class during the first week, you may be administratively dropped from the course before the 21st day of the term. Do not rely on your instructor to drop you from the courses that you want to drop. You are responsible for changing your own course schedule.

**Student Success**

Student success is a joint responsibility – that I am here to facilitate your success, but you need to come to class and do the work. Below is a list of what is required to be successful in this or any class.

*Habits of Highly Successful Students*

1. Attend class  
2. Listen  
3. Read assigned readings  
4. Ask questions  
5. Get help when you need it  
6. Make friends with someone in class. Work collaboratively with your teammates -- you want your teammates to be successful.  
7. Do not miss assignments. Do not let your teammates down.  
8. Manage your time  
9. Practice what you have learned. Rehearse what you will present to class.  
10. Start homework and programming projects early

I am here to facilitate your learning. I show you the way, you perform in class.

**Schedule**

<table>
<thead>
<tr>
<th>Week # (Mon.)</th>
<th>Topics covered</th>
</tr>
</thead>
</table>
| Week 2 (Sep. 4) | *No class Labor Day, Mon. Sept. 4, 2017*  
| Week 3 (Sep. 11) | User Experience (UX). |
| Week 4 (Sep. 18) | Universal usability. Calculator app in Android. |
Week 6 (Oct. 2) Mobile web. Non-Android app development.
Week 8 (Oct. 16) Examples good and bad. Start iGidget Project.
Week 9 (Oct. 23) Scalability among varying platforms.
Week 10 (Oct. 30) Usability and evaluation.
Week 11 (Nov. 6) iGidget Project presentations.
No classes Veterans Day (observed), Fri. Nov. 10, 2017
Week 12 (Nov. 13) Game UI.
Week 13 (Nov. 20) Game app.
No classes Thanksgiving Holiday Nov. 23-24, 2017
Week 14 (Nov. 27) Game app presentations.
Week 15 (Dec. 4) Course wrap-up.
Finals Week Final exam: Mon. Dec. 11, 2017 --- 5:30PM to 7:30PM
(starts Mon. Dec. 11)

Course Policies

Late Policy
All assignments will be due as specified in BbLearn. Project and homework assignments are accepted with a 10% late penalty per school day, i.e. 50% penalty may be imposed for work one week late and 100% penalty for work submitted over two weeks late.

If you miss a test or know you will miss a test, discuss the matter with me as soon as possible. Exceptions for extenuating circumstances can, of course, be made. If you are unable to make it to an exam or assignment submission due to a serious illness or injury, let me know as soon as possible (and be prepared to offer any supporting documentation I ask for).

Communication with professor: PLEASE include “CS399” in email
Outside of class, please contact Prof. Jacobs by attending an office hour or via regular email: steven.jacobs (at) nau.edu (not BbLearn email) for any questions, e.g. requesting an excused absence, assignment content, or your status in the class. Include “CS399” in the body or subject of the email message.

Attendance & Absentee Point Reductions
Regular attendance is expected. Attendance is taken. Don't be late, and don't leave until class is dismissed. While class attendance is expected, please be cautious about attending class if you are feeling ill. Please inform me by email if you are feeling unwell; if you are experiencing flu-like symptoms, you should not attend class; please take precautions not to infect others, and seek medical attention if your symptoms worsen. Remember, unless you are ill or have a family emergency, it is unwise to not miss any classes. Recall that absences do not include institutionally documented and approved
absences. Besides illness, absences are also permitted other medical reasons, or family matters, if discussed in advance of the missed class. If attendance is poor, I will use my judgment at the end of the semester to drop one letter grade for poor attendance.

**Plagiarism and Cheating**
Students are to work independently and without consultation with other students unless the assignment specifically states that you may collaborate. Grades are a way to motivate students and to evaluate students' mastery of a subject and their ability to get work done. The grades you get are not themselves truly important, but instead are representative of your knowledge, capabilities, and work ethic, and those are the things that matter.

If you plagiarize source code, fabricate results, make fraudulent claims, or attempt to cheat in any way, you are misrepresenting yourself, your level of understanding, your capabilities, and your ability to accomplish things. It is dishonest and unethical.

Anyone who plagiarizes, copies, fabricates, or cheats will at the least receive a zero on that assignment or test.

Consulting with others and using their advice on projects is fine. However, the work you submit should be your own work that you thoroughly understand and are entirely responsible for.

**Electronic Devices and Recording**
Feel free to bring your laptops and SmartPhones, take electronic notes, or try things out as we talk about them during lecture. Note that updating your Facebook page does not count. During exams, no electronic device use is allowed; this includes music players with headphones. Also, please be courteous to your classmates and me by silencing your cell phones. I reserve the right to ask you to stop using any device if it is bothersome or distracting to the class.

Please do not record (either audio or visually) class lectures or discussions without first obtaining permission to do so from your instructor or (if appropriate) from Disability Resources.

**Academic Contact Hour Policy**
The Arizona Board of Regents Academic Contact Hour Policy (ABOR Handbook, 2-206, Academic Credit) states: “an hour of work is the equivalent of 50 minutes of class time…at least 15 contact hours of recitation, lecture, discussion, testing or evaluation, seminar, or colloquium as well as a minimum of 30 hours of student homework is required for each unit of credit.”

The reasonable interpretation of this policy is that for every credit hour, a student should expect, on average, to do a minimum of two additional hours of work per week; e.g., preparation, homework, studying.
University Policies
There are a number of university policies that govern your education and safety that all students should be aware of. These are:
- Safe Working and Learning Environment
- Students with Disabilities
- Accommodation of Religious Observance And Practice
- Institutional Review Board (and Use Of Human Subjects)
- Academic Dishonesty
- Medical Insurance Coverage For Students
- Classroom Management
- Evacuation Policies
You will find a complete description of each policy here: http://nau.edu/university-policies/