

Application for a New Course v10.1

Course ID <i>Subject and Number</i>	IT 105
Date APPROVED	
Date DENIED	

I. Systems and Catalog Information Complete each item.

1	Course Developer	Brian G. Burton, Ed.D.
2	Course Teacher	Brian G. Burton, Ed.D.
3	Course Title	Introduction to Mobile Application Development
4	Course Abbreviation (if title is over 30 characters)	Intro to Mobile App Dev
5	College	College of Business
6	Department	School of Information Technology & Computing
7	Number of Credit Hours	3
8	Is the course Fixed Credit or Variable Credit?	Fixed
9	Is the course repeatable?	No
10	Maximum number of times course may be repeated	
11	Maximum number of hours credit	3
12	Explanation for variable credit	
13a	Course contact hours - LEC	3
13b	Course contact hours - Lab	
13c	Course contact hours - Practicum	
13d	Course contact hours - Seminar	
13e	Course contact hours - Studio	
13f	Course contact hours - Online	3
13g	Course contact hours - Colloquium	
13h	Course contact hours – Field Experience	
13j	Course contact hours - Internship	
13k	Course contact hours - Research	
13m	Course contact hours - Workshop	
13n	Course contact hours – Other (specify)	
14	Instructor Workload	3
15	Grade Mode (check all appropriate):	☒ x Standard ☒ x Credit/No Credit (undergrad only)
16	Maximum Enrollment	
17	Catalog Description (50 words or less)	Introduces the development of applications for mobile computing and technology. Students will learn to program by developing applications for mobile computing devices such as Android,

		Apple, and Microsoft phones & tablets. Theory, concepts, and hands on programming are a part of the class. This course assumes no programming background.
18	List any prerequisites (course/s, test scores, class standing, major, etc.)	A student may not receive credit for this course after receiving credit for CS 120.
19	List any co-requisites	None
20	If the course is cross listed, specify the Course ID(s) MUST have signature in Section V off all Department Chairs	
21	Does this course have any special student costs? Yes/No <i>Attach a <u>completed</u> "Request to Add or Change Course Fees" form. Describe in section IV-F.</i>	
22	How often will it be offered? Fall	
23a	How often will it be offered? Spring	1
23b	How often will it be offered? Summer	
23c	How often will it be offered? Fall	
24	Frequency?	Yearly
25	First semester this course will be offered <i>New courses may not be taught under their approved course ID until they appear in the catalog, therefore, no earlier than the coming fall.</i>	Spring 2015
26	List course/s that should be deleted, include the last semester for course/s being deleted <i>A course cannot be deleted when it is a requirement in a degree plan in any department.</i>	Yes. IT 140 Spring 2013: 18 Spring 2014: 16
27	Is this course required for a degree/s? Yes/No <i>If "Yes," attach a revised degree plan(s) reflecting the placement of the new course.</i>	No
28	Has this course been offered as a Special Topics course? Yes/No <i>If "Yes," specify the Course ID and enrollment for each term it was taught.</i>	
29	List any courses in which content overlaps the proposed course. (Course ID and Name) <i>Attach statement from instructor/dept chair of existing course justifying the new offering in Section IV-D.</i>	Limited overlap with CS 115 Introduction to Scripting, CS 120 Programming I, & CS 315 Mobile Computing I.

II. Curriculum

1	Degree Plan Explanation of how this course affects degree requirements.	The course is accepted in the CS, IT, DET, degrees as a major elective.
2	Justification State the justification for adding this course to the current curriculum. Represent the need	This course is offered as a STEM dual-enrollment to help attract high school students into the fields of Information Technology & Computer Science. It also allows students with little to no programming experience the opportunity to learn to create mobile applications.

III. Course Design

1. Audience and Course Goal

1	Describe the intended audience, including prerequisite skills.	High School Juniors and Seniors who have completed Algebra 2 and current college students who do have a limited background in technology and want to learn to create their own mobile applications.
2	State the overarching course goal(s) in performance terms.	Learn the fundamentals of programming while learning mobile app development.

2. Competencies and Measurements

	Competency	Measurement Instrument	Measurement Standard
1	Demonstrate familiarity with fundamental programming concepts to solve problems and develop mobile applications.	Projects	Project Rubric
2	Demonstrate understanding user interface design requirements based upon different needs.	Projects	Projects Rubric
3	Discuss mobile computing trends and industry developments.	Online Discussion Forums	Discussion Rubric
4	Design, create and complete a basic iPhone/iPad/Android application	Final Project	Final Project Rubric

3. Text and Resources

1. Give the full publication information of the textbook/s and other required resources and outside readings.

Burton, B. G., (2014) Learning Mobile Application & Game Development with Corona SDK. Burtons Media Group, ISBN: 978-1-937336-07-3

2. For **combined undergraduate/graduate** courses, make two lists:
 - a. full publication information; label **Undergraduate**.
 - b. full publication information; label **Graduate**. Indicate number of pages required.

IV. Supporting Documentation

Supporting documents must accompany proposal prior to preliminary approval by chair and dean.

1	Library — Submit new course application and syllabus to the Dean of the Library. Consult with the director and establish a deadline for completion of the library report. Attach the signed copy of the Library report.
2	Instructional Design — The application and syllabus must be reviewed by the Adams Center. Attach a copy of the Adams Center Review Letter.
3	Content Overlap — Include one document for each course you listed in Section I-I. Attach statement from instructor/dept chair of existing course justifying the new offering.
4	Departmental Resources — List the resources that support the course and are available only through the department, if applicable. Attach the list of the holdings and the location/s.
5	Resources — List resources (other than library or departmental resources) that are needed to support this course (computers, lab equipment, other technology, etc.). Attach a complete list of all items and indicate possible sources or estimated cost of each. List the sources of any needed funds.
6	Expenses — List additional expenses needed to implement this course (full-time or part-time faculty, graduate or lab assistants, student employees, travel, special student costs, room renovation, storage facility, etc.). Attach a complete list of all items, the estimated cost of each and the source of the funds.
7	Justification — Attach all documents referred to in Section II-2
8	Syllabus — Attach the syllabus for the course based upon the anticipated first-semester offering.
9	Provide documentation for all additional attachments here

VI. Actions *Place all actions on one page.*

Course ID: IS 105

Course Title: Intro to Mobile App Dev.

1. College Academic Council: (for all courses)

Note: Insert additional lines for College Academic Council action for each college involved in cross-listed courses.

Approved ☒ Denied ☐ *David Rubin* 4-9-14
College Dean or Director Date

Approved ☒ Denied ☐ *Marty & Lj* 3/31/14
College Dean or Director Date

2. Graduate Council: (for graduate level courses)

Approved ☐ Denied ☐ n/a _____
Dean of Graduate School Date

3. Teacher Education Council: (when applicable)

Approved ☐ Denied ☐ n/a _____
TEC Chair Date

4. University General Education Council: (when applicable)

Approved ☐ Denied ☐ n/a _____
Provost's designee Date

5. University Undergraduate Academic Council: (*undergraduate level courses*)

Approved ☐ Denied ☐ _____
Vice Provost Date

6. Academic Provost: (for all courses)

Approved ☐ Denied ☐ _____
Provost Date

7. President of the University Action: (for all courses)

Approved ☐ Denied ☐ _____
President Date

Attach notes, comments, or conditions from appropriate councils:

V. Preliminary Approvals

All supporting documentation has been assembled and attached to this application. I believe this course is ready to be presented to appropriate councils. We have a plan to fund this new course.

Course Number and Name IT 105 Intro to Mobile Apps Dev.

Primary Department

Brad Crisp

Department Chair

3/30/14

Date

Monty L. Lyle

Dean of the College

3/31/14

Date

Cross-listing Department *Add more lines if multiple departments are cross-listing*

Department Chair

Date

Dean of the College

Date

Cross-listing Department *Add more lines if multiple departments are cross-listing*

Department Chair

Date

Dean of the College

Date

IT 105 Introduction to Mobile Application Development

IV. Supporting Documentation

1. **Library** – See separate document
2. **Instructional Design** – See separate document
3. **Content Overlap** – This course teaches computer programming via the process of creating mobile applications and games. There is limited overlap between this course and other introduction to programming/scripting courses and the Computer Science course on Mobile Application Development. Sample Assignments are available in a separate document.
4. **Departmental Resources**- No new software or hardware resources are required for this course.
5. **Resources** – No new software or hardware resources are required for this course.
6. **Expenses** – Course is currently taught as an overload with additional TA support.
7. **Justification** – no additional documentation.
8. **Syllabus** – See separate document

IT 105: Introduction to Mobile Application Development

Sample Assignments

Assignment 1: Hello World

Create your own version of "Hello World".

After installing Corona and viewing the tutorials, create your own version of "Hello World" using Corona.

Assignment 2: Buttons

Create an application with two buttons; one red, one green. Tapping on the red button places the word "Red" at a random location on the screen. Tapping the green button places the word "Green" randomly on the screen.

Assignment 3: Alpha & Orientation Change

Load 3 different buttons with different colors. Using alpha and orientation change reorganize the buttons when the simulator's orientation is changed by setting the alpha of each button to zero, then use a transition.to to move the button to its new location, fading it in as it moves.

Assignment 4: Using the Math API

Create an app that shows how long it will be until the user's next birthday.

Final Assignment:

Students will create a simple mobile application that is ready to be published to an app store such as Google Play or Apple iTunes. Project must be pre-approved by course instructor.

ABILENE CHRISTIAN UNIVERSITY
LIBRARY

M E M O R A N D U M

DATE: April 7, 2014
TO: Dr. Brian Burton
FROM: Mark McCallon, Associate Dean for Library Services
RE: Course Application for IT 105 – Introduction to Mobile Application Development

After reviewing the course application, the library is able to support the proposed course. Thank you for the opportunity to evaluate the syllabus and course proposal.

Mobile Computing Programming Project Rubric

	Good	Satisfactory	Needs Improvement	Poor
1. Theory				
Conventions	Clear evidence of mobile device conventions being followed	Some evidence of mobile device conventions being followed	Little evidence of mobile device conventions being followed	No evidence of mobile device conventions
Development	Clear evidence of design considerations	Some evidence of design considerations	Little evidence of design considerations	No evidence of mobile device conventions
2. Programming				
Conventions	Clear evidence of mobile programming conventions being followed	Some evidence of mobile programming conventions being followed	Little evidence of mobile programming conventions being followed	No evidence of mobile programming conventions being followed
Functionality	Application is fully functional as detailed in the design document	Application has minor functionality not available	Application is missing significant functionality	Applications is not functional or is all smoke and mirrors.
3. User Interface				
Follows standards for UI	Clear evidence of UI conventions being followed	Some evidence of UI conventions being followed	Little evidence of UI conventions being followed	No evidence of UI conventions being followed
Aesthetics	Well developed	Developed	Needs more development	Limited or no development
Graphics	Exceptional use of graphics	Appropriate use of graphics	Inappropriate use of graphics	Graphics not used or highly inappropriate
Originality	New concepts	Fresh take on an old idea	Ordinary approach	Nothing new or original

Mobile Computing Programming Final Project Rubric

	Good	Satisfactory	Needs Improvement	Poor
1. Theory				
Conventions	Clear evidence of	Some evidence	Little evidence	No evidence of

	mobile device conventions being followed	of mobile device conventions being followed	of mobile device conventions being followed	mobile device conventions
Development	Clear evidence of design considerations	Some evidence of design considerations	Little evidence of design considerations	No evidence of mobile device conventions
2. Programming				
Conventions	Clear evidence of mobile programming conventions being followed	Some evidence of mobile programming conventions being followed	Little evidence of mobile programming conventions being followed	No evidence of mobile programming conventions being followed
Functionality	Application is fully functional as detailed in the design document	Application has minor functionality not available	Application is missing significant functionality	Applications is not functional or is all smoke and mirrors.
3. User Interface				
Follows standards for UI	Clear evidence of UI conventions being followed	Some evidence of UI conventions being followed	Little evidence of UI conventions being followed	No evidence of UI conventions being followed
Aesthetics	Well developed	Developed	Needs more development	Limited or no development
Graphics	Exceptional use of graphics	Appropriate use of graphics	Inappropriate use of graphics	Graphics not used or highly inappropriate
Originality	New concepts	Fresh take on an old idea	Ordinary approach	Nothing new or original
4. Project				
User Expectations	Project exceeds users expectations	Project meets users expectations	Project does not meet users expectations	Problem completely fails to meet users expectaions.

ACU COLLEGE OF BUSINESS ADMINISTRATION
COURSE SYLLABUS
INTRODUCTION TO MOBILE APPLICATION DEVELOPMENT (IT 105)
SECTION: ONLINE
SPRING 2014

Instructor: Brian G. Burton, Ed.D.
Asst. Prof. of Digital Entertainment & Info.Tech
Office Hours: TR 8– 9:30 AM
12-1:30 PM
Others by appointment
Phone: 325-674-6989
Office: Mabey Business (COBA) 230
Email: bgb07a@acu.edu
Website: classes.itc.acu.edu/itc

*The mission of Abilene Christian University is to educate students for
Christian service and leadership throughout the world.*

The mission of the School of Information Technology and Computing is to provide students with the highest quality education possible in the ever changing high-tech arena, and to establish within them a foundation of faith from which they can lead and serve in world-changing ways.

Course Description

Intro to Mobile App Dev (3-0-3), Introduces the development of applications for mobile computing and technology. Students will learn to program by developing applications for mobile computing devices such as Android, Apple, and Microsoft phones & tablets. Theory, concepts, and hands on programming are a part of the class. This course assumes no programming background. A student may not receive credit for this course after receiving credit for CS 120.

Contribution of Course to Overall Business Perspective

This course provides the opportunity for students to learn the skills necessary to develop their own iPhone/iPad applications and potentially market them to the greater mobile computing world.

Contribution of Course to the Development of Communication Skills

This course is structured to develop both written and programming skills. Group projects might be assigned to provide real-life experiences in group interaction by using effective communications to produce professional business outcomes.

Contribution of Course to Christian Service and Leadership

An education for Christian service and leadership means learning to deal successfully with people and to use skills, technology and opportunities to help promote full lives for ourselves and others. In this class, we study some of the basic issues in the use and understanding of how people use and communicate with and through mobile computers. In doing so, we will learn how individuals leading Christ-centered lives can effectively use their knowledge and skills to foster the well-being of others as inspired by our faith.

"Now it is required that those who have been given a trust must prove faithful." 1 Corinthians 4:2

Goals for Student Competency

In *Introduction to Mobile Application Development*, you will learn many of the tools that are used in professional and educational contexts to create projects that showcase your skills in mobile app development. You will develop an appreciation for good design characteristics that allow those who develop mobile app products to be more productive, as well as a sense of how to better use graphics to communicate.

You will also learn how to:

- Develop mobile applications using fundamental programming concepts;
- Construct a variety of different designs based upon different needs;

- Synthesize and critically examine various mobile computing trends;
- Think and reason from a variety of users perspectives.

Format

Course material will be delivered online through a mix of standard lecture presentations and computer demonstrations, combined with projects/reports, individual reading and self-study exercises, videos, homework assignments, informal review sessions, and/or guest seminars.

Course Requirements

You will be required to complete and turn in homework assignments.

Course Web Site

All of the information pertaining to this course is available on-line through the course web site. You will find class notes, handouts, electronic resources, assignments, and many other materials through the course website.

Course Competencies and Measurements

	Competency	Measurement Instrument	Measurement Standard
1	Demonstrate familiarity with fundamental programming concepts to solve problems and develop mobile applications.	Projects	Project Rubric
2	Demonstrate understanding user interface design requirements based upon different needs.	Projects	Projects Rubric
3	Discuss mobile computing trends and industry developments.	Online Discussion Forums	Discussion Rubric
4	Design, create and complete a basic iPhone/iPad/Android application	Final Project	Final Project Rubric

Homework Assignments

Because of the nature of this course, students cannot expect to do well without regular practice. Consequently, homework will be assigned on a regular basis, although not all assignments will be collected and graded. You are encouraged to complete all assigned work and to seek help outside of class if you need it.

Unless otherwise specified, homework assignments are due at the beginning of class on the due date. **No late assignments will be accepted.** Further, unreadable or sloppily written assignments will not be accepted.

Exams

There will be no exams. This course is project based.

Term Project

You will be required to participate in a term project involving creation of a mobile computing project. This activity is designed to represent a typical project that might be undertaken in creating a mobile computing application

Course Calendar

The following is a tentative semester schedule. This schedule will be modified as necessary during the course.

Week 1: Chapter 1/Hello World proj.	Week 6: Chapter 6/UI Design	Week 11: Chapter 11/Widgets
Week 2: Chapter 2/Buttons proj.	Week 7: Chapter 7/ Begin final proj	Week 12: Chapter 12/System Tools Pr
Week 3: Chapter 3/Orientation proj.	Week 8: Chapter 8/Physics proj.	Week 13: Chapter 13/File I/O
Week 4: Chapter 4/Textfield proj.	Week 9: Chapter 9/ Game Design proj	Week 14: Chapter 14/Databases
Week 5: Chapter 5/Graphics proj.	Week 10: Chapter 10/ Tables	Week 15: Chapter 15/Networking

Grade Composition

Your grade will be computed on the following basis (TENTATIVE):

Activity	Value	Completion or Due Date
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8 Homework projects	10% each	As assigned
Online Discussions	5%	
Final Project	15%	

Grading System

Each activity (exam, homework assignment, quiz, etc.) will be graded on the basis of 100%. The grading system for the course is given in the following table.

Letter Grade	Semester Combined Average
A	90 or above
B	80 – 89.9
C	70 – 79.9
D	60 – 69.9
F	Below 60

There is no pre-established quota of As, Bs, Cs, etc. for this class. The article “Clarifying Grade Expectations” (John Williams, 1993, *The Teaching Professor*, vol. 7, no. 7, p. 1) generally reflects your instructor’s approach to grading.

Attendance Policy

In business environments, employees who are often absent from, or tardy to, work do not enjoy long-term employment, regular pay increases, or good professional reputations. In this class you will be learning to solve problems similar to those you will encounter in professional settings, and the consistency with which you participate in class reflects your commitment to the training necessary to pursue a business career. **Because the pace of this course is quite rapid, you cannot expect to do well if you do not participate in class.**

Academic Integrity

Honor Code

ACU College of Business Administration

Objective

COBA faculty, staff and students will strive to proclaim in their lives competence, character and community. In joining COBA, students, faculty, and staff covenant to abide by the following ethical principles.

Competence

To lead and serve well requires competence. And to become competent requires diligence and hard work. We owe it to all who have prepared the way and who will follow in our footsteps, to be good stewards of opportunities and resources. Thus, in all you do: set priorities, seek excellence and professionalism in your work, satisfy requirements, and take responsibility for your learning and performance. You cannot build competence if you lie, cheat, steal, or tolerate those who do.

Character

A reputation of good character is built slowly through testing, yet can be destroyed in an instant by compromise or careless work, just as it can through injustice. Guard your character; it is worth more than a grade or promotion. “A good name is more desirable than great riches; to be esteemed is better than silver or gold” (Proverbs 22:1). You cannot build character if you lie, cheat, steal, or tolerate those who do.

Community

A spirit of fellowship and mutual encouragement holds each community member accountable. Accountability leads to a healthy community through adequate preparations for the tasks at hand, respectful truthfulness in all situations, and adding value to the tasks at hand. As a community, we must hold each other accountable to the principles of competence, character, and community. You cannot build community if you lie, cheat, steal, or tolerate those who do.

We support ACU’s Academic Integrity Policy

(www.acu.edu/campusoffices/studentlife/documents/Acad_Integ_Policy_Fa.pdf). This important policy offers examples of academic infractions and a process for assigning consequences and voicing appeals. Ignorance of this policy is never an excuse. Individual instructors will define course specific definitions, however, in general you should avoid:

Plagiarism - Copying or even paraphrasing words or ideas from another source (including current or past students) without giving adequate credit.

Lying - Inventing data or sources or making false attributions about the origin of material or offering a deceptive

reason for an absence or delay in the completion of academic work.

Cheating - Facilitating or participating in any process that circumvents the intent of any exam, test, quiz, paper, or assignment.

Any dishonest act observed or reported will be investigated and if proven, be reported in administrative offices and records, and may be subject to any or all of the following outcomes based on severity:

A zero for the assigned work
A failing grade for the course
Dismissal from the university

*Ratified by Faculty:
11/18/2004*

Communications

To facilitate consistency in communications of courses requirements, assignments, and general information, and to make the course as paperless as possible, your instructor will regularly communicate with you via email using your ACU email address. You are encouraged to check your ACU email everyday for messages from your instructor. In addition, announcements and course materials will be posted to the course web site on a regular basis, and you are also encouraged to check that facility often.

Students with Disabilities

Abilene Christian University is committed to providing a learning atmosphere which reasonably accommodates qualified persons with disabilities. If you feel you have a disability which may impair your capacity to successfully complete this course, please contact the Director of Disability Services (674-2667) in Alpha Academic Services. Student Disability Services assists students with disabilities in obtaining appropriate academic accommodations.

Text and Supplements

The following texts and classroom resources will be used in the course:

Text: Burton, B. G., (2014) Learning Mobile Application & Game Development with Corona SDK, Burtons Media Group, ISBN: 978-1-937336-07-3