

# UNDERGRADUATE COUNCIL

## Request for New Course

Originating unit requesting course: \_\_\_\_\_

New course title: \_\_\_\_\_

New course number: \_\_\_\_\_

Appropriate computer abbreviation if title is more than 30 spaces: \_\_\_\_\_

Prerequisites for new course:

Effective date for course (semester and year): \_\_\_\_\_

Instructional methodology (Click in box to the left of the name to select a course type.)  
(See departmental chairperson or deans for definition of type.):

- |                                      |                                   |   |                                       |
|--------------------------------------|-----------------------------------|---|---------------------------------------|
| <input type="checkbox"/> activity    | <input type="checkbox"/> clinical | <input type="checkbox"/> directed study           | <input type="checkbox"/> internship   |
| <input type="checkbox"/> laboratory  | <input type="checkbox"/> lecture  | <input type="checkbox"/> lecture w/integrated lab |                                       |
| <input type="checkbox"/> performance | <input type="checkbox"/> research | <input type="checkbox"/> seminar                  | <input type="checkbox"/> study abroad |

Description of new course (as it will appear in catalog copy):

The course introduces Android app development using Kotlin. This is a project-based course with the focus on developing simple to moderately complex Android apps. Along the way, students will learn the important concepts of Kotlin programming as well as how to implement key Android features.

**1. Submit a representative course syllabus that includes the following:**

- a. A concise course description including the course purpose (e.g. fulfill part of university, college, or department mission, discipline requirement, program enrichment, etc.) and course instructional methodology (e.g. lecture, laboratory, lecture and laboratory, clinical, internship, etc.)
- b. the goals of the course;
- c. a clear statement of course expectations - essentially, what students shall be expected to do in order to satisfactorily complete the course at different performance levels (generally speaking, what does it take to get an A, B, C, etc.);
- d. a statement of the faculty member's policies on attendance, make-up work, missed exams, etc;
- e. information concerning major projects or papers and when these assignments must be completed by the students;
- f. information about the number and dates of the exams;
- g. statements reflecting TCU policy regarding accommodations under Americans with Disabilities Act (ADA) ([this disabilities statement](#) MUST be included *verbatim*) and university policy regarding academic misconduct ([this statement](#), while not required, may be used); and
- h. a statement indicating how the instructor can be reached and how office hour requirements will be met.

A [syllabus template](#), which includes these required elements and others, is available from the Koehler Center.

**2. Faculty Resources: How will the unit provide faculty support for this course?**

**Describe how this course will impact other current departmental listings.**

The department could provide access to resources such as development tools, documentation, and online communities to help faculty and students stay up-to-date on the latest trends and best practices in mobile app development.

The course can help to broaden the scope of the computer science curriculum, providing students with exposure to a new area of study. This can help to make the curriculum more diverse and inclusive, and can also help to prepare students for a wider range of careers in the field.

**3. Educational Resources: Will this course require additional resources not currently available (e.g., space, equipment, library)?**       Yes       No

**4. If this course affects other units of the University, include a statement signed by chairperson of the affected unit(s).**

**5. If cross-listed, provide evidence of approval of all curriculum committees appropriate to both the originating and cross-listed units.**

**6. If this course is to be delivered online, include a letter from the Koehler Center stating that program administrators and identified faculty are working with the Koehler Center to fulfill TCU Distance Learning requirement.**

Revised 11/2013

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Approval signature of chairperson of originating unit

# COSC 40043-XXX Mobile App Development

**Instructor Name:** Dr. Bo Mei

**Semester/Year:** Fall 2023

**Number of Credits:** 3

**Class Time:** TBA

**Class Location:** TBA

**Office Hours:**

- Time: TBA
- Location: TUC 341E

**Email:** [b.mei@tcu.edu](mailto:b.mei@tcu.edu)

**Response Time:** Emails will be responded within 24 hours including weekends.

## Final Exam

**Final Exam Date:** TBA

**Final Exam Format:** The final exam is taken in the lecture classroom. The exam only contains programming questions, and students are asked to use their laptops to take the exam. The final exam is comprehensive with an emphasis on the second half of the semester.

**Final Exam Policy:**

- The exam is open book. Students can use the notes on paper and the notes stored locally on the laptops.
- The laptops **MUST** remain disconnected from the Internet except for downloading exam questions and submitting exam solutions.

**Rescheduling of Finals Policy:** Rescheduling is permitted **ONLY** for graduating seniors or to meet the 24-hour rule.

## Important Dates

**Midterm Exam:** TBA

**Final Exam:** TBA

**Last Day to Drop:** TBA

**Last Day to Select P/NC:** TBA

## Course Description

The course introduces Android app development using Kotlin. This is a project-based course with the focus on developing simple to moderately complex Android apps. Along the way, students will learn the important concepts of Kotlin programming as well as how to implement key Android features.

## Learning Outcomes

1. Understand key Kotlin concepts.
2. Be able to use Kotlin to develop general programs.
3. Understand Android app development process.
4. Be able to make a development plan based on clients' requirements.
5. Know how to implement key Android features.
6. Know how to design user-friendly interfaces.
7. Be able to develop simple to moderately complex Android apps.
8. Apply the best practices when using Kotlin and building Android apps.

## Course Topics

1. Getting ready with Android Studio
2. Kotlin Fundamentals
3. Developing Age in Minutes Calculator App
4. Developing Calculator App
5. Developing Quiz App
6. Developing Paint App
7. Developing Weather App

## Prerequisites

**Prerequisite:** COSC 30403 Programming Language Concepts with a C- or better

## Textbooks, Slides and Devices

**Textbook:** (Recommended, not required) Bryan Sills, Brian Gardner, Kristin Marsicano, Chris Stewart, *Android Programming: The Big Nerd Ranch Guide*, 5<sup>th</sup> Edition, ISBN: 978-0137645541

**Lecture Files:** Lecture files including sample code will be made available on TCU Online.

**Device Information:** Students **MUST** be able to access laptops to complete all projects and exams. Students should also bring their laptops to **EVERY** lecture. The operating system can be Windows or macOS.

## Assessments and How to Get Help

### Projects:

- A project is typically to develop a specific app. Each app is only partially developed during the lectures, and the project submission is expected to be a complete app that meets all the requirements.

- Late projects are accepted with a penalty of 10% per calendar day up to a maximum of 5 days. Afterwards, the project is worth 0 points.
- Students are encouraged to share thoughts and ideas. However, a student should **NEVER** share his code to another student. It is **PROHIBITED** to even share one line of code.
- All projects will be graded by the grader.

**Exams:**

- Both exams are taken in the lecture classroom. The exams only contain programming questions, and students are asked to use their laptops to take the exams. The final exam is comprehensive with an emphasis on the second half of the semester.
- Both exams are open book. Students can use the notes on paper and the notes stored locally on the laptops.
- The laptops **MUST** remain disconnected from the Internet except for downloading exam questions and submitting exam solutions.
- **ONLY** the final exam can be rescheduled. Rescheduling is permitted **ONLY** for graduating seniors or to meet the 24-hour rule.
- Both exams will be graded by the professor.

**Office Hours:** Refer to Page 1 for detailed information.

## Grading

**Grade Breakdown:**

Activity	Percent Per Instance	Quantity	Percent
Projects	8.57%	7	60%
Exams	20%	2	40%

**Grading Scales:** The final course grades will **NOT** be curved with no exceptions. Please also be aware that extra credits/work will **NOT** be given with no exceptions.

≥93	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	<60
A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

## Course Policies

**Late Work:** Late projects are accepted with a penalty of 10% per calendar day up to a maximum of 5 days. Afterwards, the project is worth 0 points.

**Make-Up Work:**

- Make-up work will **ONLY** be permitted for two reasons: an official university absence or documented medical appointments.

- A student who has an official university absence must contact the instructor **BEFORE THE ABSENCE** to schedule a make-up of any assessment that will be missed.
- A student who has a documented medical appointment will need to bring in documentation of medical excuse in order to make up the work. Such medical related absences will be rescheduled accordingly.

**Extra Credits:**

- Extra credits/work will **NOT** be given with no exceptions. This policy will be strictly enforced toward the end of the semester.
- The final course grades will **NOT** be curved with no exceptions.

**Attendance:** Attendance will not be taken. Students will be considered **RESPONSIBLE** for all material presented during their missed lectures.

**Cheating and Plagiarism:** Students are encouraged to share thoughts and ideas. However, a student should **NEVER** share his code to another student. It is **PROHIBITED** to even share one line of code.

## **Student Access and Accommodation**

Texas Christian University affords students with disabilities reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. To be eligible for disability-related academic accommodations, students are required to register with the TCU Office of Student Access and Accommodation and have their requested accommodations evaluated. If approved for accommodations, students are required to discuss their official TCU Notification of Accommodation with their instructors. Accommodations are not retroactive and require advance notice to implement. The Office of Student Access and Accommodation is located in The Harrison, Suite 1200. More information on how to apply for accommodations can be found at <https://www.tcu.edu/access-accommodation/> or by calling Student Access and Accommodation at (817) 257-6567.

## **Academic Misconduct**

Academic Misconduct (Section 3.4 of the Student Code of Conduct found in the Student Handbook (<https://deanofstudents.tcu.edu/student-handbook/>)): Any act that violates the academic integrity of the institution is considered academic misconduct. The definitions and procedures used to resolve suspected acts of academic misconduct are available in the offices of the Academic Deans and Dean of Students, and are also listed in detail in the Undergraduate Catalog (<http://tcu.smartcatalogiq.com/current/Undergraduate-Catalog/Student-Policies/Academic-Conduct-Policy-Details>) and the Graduate Catalog (<http://tcu.smartcatalogiq.com/en/current/Graduate-Catalog/Academic-Conduct>).