**JSC «Kazakh-British Technical University»**

**Faculty of Information Technology**

**APPROVED BY**

**Dean o f FIT**

**Bissembayev A.S.\_\_\_\_\_\_\_\_**

**«\_\_\_\_»\_\_\_\_\_\_\_\_\_ 2022.**

**SYLLABUS**

**Discipline: IOS Development**

**Number of credits: 3 (2/0/1)**

**Term: SPRING 2021**

**Instructor’s full name: Alibek Bissembayev**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Personal Information about the Instructor** | **Time and place of classes** | | **Contact information** | |
|  | **Lectures** | **Office Hours** | **Tel.:** | **e-mail** |
| **Alibek Bissembayev**  **Associate Professor** | According to schedule | Tuesday,  16:00-17:00 |  | a.bisembaev@kbtu.kz |

**Course duration:** lectures 2 hour a week, practices 1 hours a week, 14 weeks

**Course objectives**

This course helps a specific skill related to Swift or app development. Each chapter starts with a brief introduction to the concept, a set of learning objectives, new vocabulary terms, and references to documentation used to build the lesson.

By the end of the course students will have gained a fundamental understanding of programming in Swift by creating a variety of scripts and applications for systems development. Swift is a versatile programming language, suitable for projects ranging from small scripts to large systems.

**Course outcomes**

Upon successfully completing this course, students will be able to “do something useful with Swift”.

* Identify/characterize/define a problem
* Design a program to solve the problem
* Create executable code
* Read most Swift code
* Write basic unit tests

**Prerequisites:** This course is intended for absolute beginners in programming. Students are expected to be able to open command prompt window or terminal window, edit a text file, download, and install software, and understand basic programming concepts.

**Post requisites:**

**-**

**Literature:**

**Required:**

1. Develop in Swift Fundamentals
2. Develop in Swift Explorations

**Supplementary:**

1. **Develop in Swift Data Collections**

**COURSE CALENDAR**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Class work** | | | | **SIS** |
|  | **Period** | **Topic** | **Lecture hours** | **Practical hours** | **Chapters for reading** |  |
| **1** | **Week 1** | **Lecture #1.** Introduction to Swift and Playgrounds | **2** | **1** |  |  |
| **2** | **Week 2** | **Lecture #2.** Constants, Variables and Data Types | **2** | **1** |  | **Ass. 1** |
| **3** | **Week 3** | **Lecture #3.** Operators | **2** | **1** |  | **Ass. 2** |
| **4** | **Week 4** | **Lecture #4.** Control Flow | **2** | **1** |  | **Ass. 3** |
| **5** | **Week 5** | **Lecture #5.** Building, Running, and Debugging an App | **2** | **1** |  | **Ass. 4** |
| **6** | **Week 6** | **Lecture #6.** Interface Builder Basics | **2** | **1** |  | **Ass. 5** |
| **7** | **Week 7** | **Lecture #7.** Introduction to UIKit | **2** | **1** |  |  |
| **8** | **Week 8** | Midterm exam | **2** | **1** |  |  |
| **9** | **Week 9** | **Lecture #9.** Strings, Functions, and Structures | **2** | **1** |  | **Ass. 6** |
| **10** | **Week 10** | **Lecture #10.** Classes, Inheritance, and Collections. Loops. | **2** | **1** |  | **Ass. 7** |
| **11** | **Week 11** | **Lecture #11.** Displaying Data | **2** | **1** |  | **Ass. 8** |
| **12** | **Week 12** | **Lecture #12.** Navigation and Workflows | **2** | **1** |  | **Ass. 9** |
| **13** | **Week 13** | **Lecture #13.** Constant and Variable Scope | **2** | **1** |  | **Ass. 10** |
| **14** | **Week 14** | **Lecture #14.** Building Simple Workflows | **2** | **1** |  |  |
| **15** | **Week 15** | End term exam | **2** | **1** |  |  |

**COURSE ASSESSMENT PARAMETERS**

|  |  |
| --- | --- |
| **Type of activity** | **Final scores** |
| Midterm | 10% |
| End term | 10% |
| Assignments | 40% |
| Final exam | 40% |
| **Total** | **100%** |

**Criteria for evaluation of students during semester:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Assessment criteria** | **Weeks** | | | | | | | | | | | | | | | | | **Total scores** | |
|  |  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16-17** |  | |
| 1. | Midterm |  |  |  |  |  |  |  | \* |  |  |  |  |  |  |  |  | 10% | |
| 2. | End term |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \* |  | 10% | |
| 3. | Assignments (SIS) |  | \* | \* | \* | \* | \* |  |  | \* | \* | \* | \* | \* |  |  |  | 40% | |
| 4. | Final Exam |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \* | 40% | |
|  | **Total** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **100%** | |

**Academic Policy**

KBTU standard academic policy is used.

* **Cheating, duplication, falsification of data, plagiarism, and crib are not permitted under any circumstances!**
* Attendance is mandatory.

**Attention**. Missing 20% attendance to lessons, student will be taken from discipline with filling in F (Fail) grade.

**Students must participate fully in every class. While attendance is crucial, merely being in class does not constitute “participation”. Participation means reading the assigned materials, coming to class prepared to ask questions and engage in discussion.**

* Students are expected to take an active role in learning.
* Written assignments (independent work) must be typewritten or written legibly and be handed in time specified. **Late papers are not accepted!**
* **Students must arrive to class on time.**
* Students should always show tolerance, consideration, and mutual support towards other students.
* **Talking (unrelated to class), playing with computers or any kind of smart devices in the class.**
* **If you want to walk out of class, please do not come back to that hours of class again**

*Associate Professor Bissembayev A.S.*