LAU
School of Arts and Sciences

Department of Computer Science & Mathematics

Course Name:	**BIF 244 – Intro. To Script Programming**
Class Time and Location	MTWRF 11:00-12:29 pm Sage Hall
INSTRUCTOR	Dr. Georges Khazen
Course Coordinator	Dr. Georges Khazen
Course Co-coordinator	
Credits Hours:	3
Semester:	Summer I 2015

INSTRUCTOR
Dr. Georges Khazen
Email: gkhazen@lau.edu.lb
Office: Part Timer Office
Office Hours: MWF 10:00-11

CURRENT CATALOG DESCRIPTION
This course introduces students to different scripting languages and their applications. It includes: shell scripting, Perl and Python and Ruby. It also covers writing scripts to control other programs, description of the weaknesses and strengths of interpreted languages, embedding functions of a script language in other tools, in addition to the syntax and usage of regular expressions, shell and bash commands.

PREREQUISITE/CO-REQUISITE
None

COURSE TYPE
Required ☐ Elective ☒ Selective Elective ☐

Objective

COURSE LEARNING OUTCOMES
At the completion of this course, the student will able to:
1. Explain the common characteristics of scripting languages and how they differentiate from system languages
2. Use regular expressions to parse and tokenize data
3. Automate workflows using shell scripts
4. Handling text in the shell
5. Reading and Writing Files using Perl, PHP and Python
6. Packaging data and converting its format

TEXTBOOK
- Introduction to Perl for Bioinformatics
- Practical Computing for Biologists

TOPICS COVERED IN THE COURSE

Week	Lecture / activity	
1	Introduction to scripting, Regular Expressions: Powerful search and replace	
2	Command line operations: the shell, handling text and piping	Exam1
3-4	Perl Reading, writing files and formatting data. Decision and loops, merging files and debugging strategies.	Exam2
5	Python: Reading, writing files and formatting data. Decision	

	and loops, merging files and debugging strategies.	
6	Combining methods and dealing with online databases	Final

TEACHING/LEARNING METHOD
Lectures; practicals; project development by students.

REFERENCES
Click here to enter text.

COURSE GRADING AND PERFORMANCE CRITERIA (SUBJECT TO 5% VARIATION)
Attendance (5%) + Assignments (15%), Presentations (10%) + Midterm (35%) and Final Project (35%)

Attendance 5%
Exam 1 15
2 25
Final 35%

POLICY ON CHEATING AND PLAGIARISM
Students caught cheating on an exam receive a grade of zero on the exam in their first cheating attempt and receive a warning. Students caught cheating for the second time in the same course will receive a grade of "F" in the course and a second warning.

Plagiarism on assignments and project work is a serious offense. If plagiarism is detected, a student will be subject to penalty, similar to the cheating case, which ranges from receiving a zero on the assignment concerned to an "F" in the course in addition to a warning.

UNIVERSITY ATTENDANCE POLICY
Missing one third of classes implies that a student has to drop the course (It is the student's responsibility to drop the course).

WITHDRAWAL POLICY

WI is equivalent to Early Withdrawal
WP is equivalent to Withdrawal/Pass
WF is equivalent to Withdrawal/Fail

1. A student who withdraws after the Drop/Add period and by the end of the 5th week of classes (10th day of classes for Summer Modules) will obtain a "WI" on that particular course.

The student may process such request directly through the Registrar's Office.

2. A student who withdraws from a course between the 6th week and the end of the 10th week of classes (18th day of classes for Summer Modules) will receive either a "WP" or a "WF". "WP" or "WF" will be determined by the instructor based on the achieved academic performance in that course till the time of withdrawal.
3. The "WI" and the "WP" will not count as a Repeat; whereas the "WF" will count as a Repeat.
4. "WI", "WP" and "WF" will not count towards the GPA calculation.

Deadline for the "WP" and "WF" withdrawal from courses: check university calendar (It is the student's responsibility to drop the course)

COURSE ONLINE EVALUATIONS
Completion of the online course evaluations is important for feedback and improvement. Students are highly encouraged to complete the course evaluations at the end of the semester.

TIPS FOR SUCCESS

- Actively participate in class.
- Don't wait until the last minute to start your assignments or to study for an exam.
- Keep up with homework and course activities.
- **Please communicate with me if you have any questions/difficulties/challenges**.

ADDITIONAL REMARKS

- Deadlines for the assignments **must be respected**.

- Make-ups and Incomplete: students are not automatically entitled to make-ups; F will be given until reasons (in writing and within one week of absence) are presented and approved.
- Some of the exam questions will be based on class discussion and assignments.
- **No mobile phones in the classroom.**
- Please: Do NOT use plastic folders for reports; use paper (environmentally safer) or reusable folders (to reduce waste).

RELATIONSHIP BETWEEN COURSE OUTCOMES AND PROGRAM OUTCOMES

ASSESSMENT PLAN FOR THE COURSE

Embedded (project assignments and exams)