

Course Handout

Semester: August-December

Academic Year: 2019-20

Course Code: CS 4191

Course Title: Capstone-II

L T P C: 1 0 6 4

Programme: B.Tech. CSE

Course-in-charge: Prof. Eswaran Narasimhan

1. Course Description

By empowering students with the skills necessary to access, understand and evaluate Information, Capstone Project will support students in the achievement of 21st century learning expectations. Students work in teams to develop or implement a real-world IT solution.

- Address a typical business and organizational need such as data management, application development, system deployment, or security analysis.
- Apply information technologies, applications, best practices, and standards in technical design, development, and implementation.
- Practice soft skills in a real-world IT project, including project planning and management, research and learning, communication, writing, presentation, and teamwork.
- Use DevOps techniques and procedures so that student can deliver with maximum speed, functionality and innovation.

2. Topics

1. Maven and pyb (using Django/Flask)
2. Advanced Jenkins
3. Advanced Docker
4. Selenium

3. Tentative Session Plan:

S.No	Topics	No. of lecture
1	Build Tool - Maven and pyb (using Django/Flask)	2
2	Advanced Jenkins - Working with pipelining, monitoring, notification, distributed build.	2
3	Advanced Docker - Docker Cloud, logging, Continuous Integration, Kubernetes.	4
4	Testing Tool - Working with Selenium	3
5	Introduction to Capstone – selecting and preparing for a project	1
6	Introduction to software estimation	1
7	Preparing for a demonstration of the project	1
8	Testing challenges	1

4. Evaluation Scheme

Mid-Term 1 Assessment (15%)

Problem Identification	5	
Project Plan (Initial)	2	
Professionalism		
Communication	Presentation	Semester wide assessment
1	1	1
Industrial Development Environment & Tools		
	Central Repository	Jenkins
Usage	3	2

Mid-Term 2 Assessment (30%)

Industrial Development Environment & Tools					
	Build Tool	Central Repository	Integration	Infrastructure	Testing
Usage	2	4	4	3	2
Design & Solution					
Team			Individual		
4			8		
Professionalism					
Communication		Presentation		Semester wide assessment	
1		1		1	

Final Assessment (45%)

Industrial Development Environment & Tools
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	Build Tool	Central Repository	Integration	Infrastructure	Testing
Usage	1	4	1	2	2
Design & Solution					
Team			Individual		
6			22		
Project Plan Final			3		
Professionalism					
Communication			Presentation		
2			2		

5. Attendance Policy

As per NIIT University attendance policy.

6. Make up Policy

It is the responsibility of a student to be in full attendance in all the classes whether a lecture or a tutorial or a practical or an extra class or a seminar and appear in all the components of evaluation. The students are required to be regular in their studies and should be ready to appear in any component of evaluation even within a short notice or for a surprise test/quiz in the class.

A student should avoid missing the class unless one is sick or has to go to attend some function in which his/her presence is required. If a student is likely to miss or has missed a component of evaluation because of unforeseen situation, he/she should approach the Course-in-charge / Course Instructor and inform him/her with the reason at the earliest.

If the Course-in-charge is satisfied with the reason for missing the component of evaluation, he/she may arrange for a make-up examination of the component within a week. If no make-up is granted or taken by the student, he/she will be treated as absent and awarded zero in that component. The make-up exam may be SIGNIFICANTLY MORE DIFFICULT than the original exam.

The decision of the Course-in-charge in all matters of make-up shall be final.

7. Plagiarism

Plagiarism in any form is unacceptable and will be treated seriously.

8. Grading Policy

Marks obtained in all the components of evaluation shall be totaled and the final marks shall be converted in the letter grades as per NIIT University policy.

Mid-semester grading will be announced as per Academic Calendar.

9. Pedagogy

White board/marker, lecture slides, as well as open course ware will be used as teaching methodologies.

10. Reference Books:

1. Jenkins 2: Up and Running, Brent Laster, O'Reilly Publisher
2. Maven: The Complete Reference, Tim O'Brien Manfred Moser John Casey Brian Fox Jason Van Zyl Eric Redmond Larry Shatzer.
3. Docker in Action, Jeff Nickoloff.
4. Selenium 2 Testing Tools: Beginner's Guide, David Burns, PACKT

11. Consultation Hour

The students can meet the Mr. Manish on matters related to Capstone Project being done, in FRL lab –

- Wednesday 10:30am to 1:30 pm
- Thursday 8:30am to 11:30 pm and 2:30pm to 5:30pm
- Friday 8:30pm to 11:30 pm
- Saturday 10:30am to 1:30pm and 2:30pm to 5:30pm

All information regarding course will be posted on Moodle. Students are requested to check Moodle regularly. Additionally, the student may approach the Course-In-Charge by email to schedule appointments.