# **KTU Students**

Course	Course Name	L-T-P -	Y	ear of		
code		Credits	Intro	oduction		
<u>CS486</u>	OBJECT ORIENTED PROGRAMMING	3-0-0-3	1 2	2016		
<b>Pre-requisite:</b> A course on C or C++ in the B-Tech level with emphasis on pointers and						
Course Objectives:						
• 10 impart the basic concepts of object oriented design techniques.						
<ul> <li>To introduce the bosics of multitlene dimensional anguage.</li> </ul>						
• To introduce the basics of multitureading, network programming, database						
• To import the techniques of creating GIU based applications						
- 1	s impart the teeninques of creating 0.01 based appreador					
Syllabus						
Object of	oriented concepts-Java Overview, Classes and ob	ojects, Par	ameter	passing		
Overload	ing, Inheritance, Overriding, Packages, Exception Hand	lling, Input	/Output	, Thread		
and multithreading, Network programming using stream and datagram sockets, Applets,						
Event Ha	ndling mechanism, Working with frames and graphics, A	AWT Contr	ols, Sw	ings, Java		
database	connectivity.					
Expected	Outcome:					
The Stude	ent will be able to:					
i. ap	oply object oriented principles in software design process					
11. de	evelop multithreaded client/server applications using soch	ket progran	ımıng			
111. create GUI based applications with database at back end						
Text Bo	ok:					
1. B	alagurusamy E., Programming JAVA a Primer, 5/e, McC	Graw Hill, 2	2014			
2. H	erbert Schildt, Java: The Complete Reference, 8/e, Tata I	McGraw H	ill, 2011			
D . f						
Keferences:						
1. D	arciay K. and J. Savage, Object Oriented Design with 0.	WIL and Jav	va, Eise	viel,		
2 El	anagan D. Java in A Nutshell 5/e O'Reilly 2005					
2. Fianagan D., Java m A Muishell, J/C, O Kenny, 2003. 3. Nageswararao R. Core Java: An Integrated Approach. Dreamtech Dress, 2009						
4. Sierra K. Head First Java 2/e O'Reilly 2005						
5. Y. Daniel Liang, Introduction to Java Programming, 7/e. Pearson, 2013.						
Course Plan						
				End		
Madula	Contonto	]	Hours	Sem.		
Module	Contents			Exam		
				Marks		
	Object oriented concepts- Features of Object	oriented				
	programming - Encapsulation -data hiding , polymo	orphism,				
Ι	inheritance – types of inheritance – Dynamic	linking-	06			
	Introduction to Java- bytecodes- Java virtual machine,	- Salient	00			
	features of Java, Java programming -Data types, o	perators,				
	control statements, Arrays,					
	Classes fundamentals, objects, methods, constr	ructors,				
II	parameter passing, overloading, access control key	words,	07	15%		
	static variables and methods, nested classes.					
	FIRST INTERNAL EXAMINATIO	Ν				

III	Inheritance basics, method overriding, abstract classes, interfaces. Defining and importing packages. Exception handling fundamentals, multiple catch and nested try statements.	06	15%		
IV	Input/Output: files, stream classes, reading console input. Threads: thread model, use of Thread class and Runnable interface, thread synchronization, multithreading.	06	15%		
SECOND INTERNAL EXAMINATION					
V	Strings in Java. Applet basics and methods. Event Handling: delegation event model, event classes, sources, listeners.	07	20%		
VI	Introduction to AWT: working with frames, graphics, color, font. AWT Control fundamentals. Swing overview. Java database connectivity: JDBC overview, creating and executing queries	08	20%		

# END SEMESTER EXAM

### **Question Paper Pattern (End semester exam)**

- 1. There will be *FOUR* parts in the question paper A, B, C, D
- 2. Part A
  - a. Total marks : 40
  - *TEN* questions, each have 4 marks, covering all the SIX modules (*THREE* questions from modules I & II; *THREE* questions from modules III & IV; *FOUR* questions from modules V & VI).
    - All the TEN questions have to be answered.

#### 3. Part B

- a. Total marks : 18
- b. *THREE* questions, each having **9 marks**. One question is from **module I**; one question is from **module II**; one question *uniformly* covers **modules I & II**.
- c. Any TWO questions have to be answered.
- d. Each question can have *maximum THREE* subparts.

#### 4. Part C

- a. Total marks : 18
- b. *THREE* questions, each having 9 marks. One question is from module III; one question is from module IV; one question *uniformly* covers modules III & IV.

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- c. *Any TWO* questions have to be answered.
- d. Each question can have *maximum THREE* subparts.

## 5. Part D

- a. Total marks : 24
- b. *THREE* questions, each having 12 marks. One question is from module V; one question is from module VI; one question *uniformly* covers modules V & VI.
- c. Any TWO questions have to be answered.
- d. Each question can have *maximum THREE* subparts.
- 6. There will be *AT LEAST* 60% analytical/programming/numerical questions in all possible combinations of question choices.