

**PES UNIVERSITY**  
(Established under Karnataka Act No. 16 of 2013)  
100 Feet Ring Road, BSK III Stage, Bengaluru-560 085  
Department of Computer Science and Engineering

Session : Jan - May, 2020

**MODE OF CONDUCTION(ISA-ESA PATTERN): SUMMARY**

**SEMESTER – 4**

**Core Course**

<b>UE18MA251 – Linear Algebra</b>		<b>Anchor: Prof. Geetha Shankar</b>
<b><u>Pattern:</u></b> <b>ISA – 40 Marks (ISA - 1 + ISA – 2 + Assignment)</b> <b>ESA – 60 Marks</b>		
ISA -1	CBT (40 Marks -> 15 Marks)	
ISA - 2	CBT (40 Marks -> 15 Marks)	
Assignment	10 Marks	
ESA	Pen & Paper (100 Marks -> 60 Marks)	
<b>UE18CS251 – Design and Analysis of Algorithms</b>		<b>Anchor: Prof. Channa Bankapur</b>
<b><u>Pattern:</u></b> <b>ISA – 40 Marks (ISA – 1 + ISA – 2 + Assignment)</b> <b>ESA – 60 Marks</b>		
ISA -1	CBT (40 Marks -> 15 Marks)	
ISA - 2	CBT (40 Marks -> 15 Marks)	
Assignment	10 Marks	
ESA	Pen & Paper (100 Marks -> 60 Marks)	
<b>UE18CS252 – Database Management Systems</b>		<b>Anchor: Prof. Suresh Jamadagni</b>
<b><u>Pattern:</u></b> <b>ISA – 60 Marks (ISA – 1 + ISA – 2 + Assigmnment)</b> <b>ESA – 40 Marks</b>		
ISA -1	CBT (40 Marks -> 20 Marks)	
ISA - 2	CBT (40 Marks -> 20 Marks)	
Assignment	20 Marks	
ESA	Pen & Paper (100 Marks -> 40 Marks)	
<b>UE18CS253 – Microprocessor and Computer Architecture</b>		<b>Anchor: Dr. Jayashree R</b>
<b><u>Pattern:</u></b>		

<b>ISA – 40 Marks (ISA – 1 + ISA – 2)</b>	
<b>ESA – 60 Marks</b>	
ISA -1	CBT (40 Marks -> 20 Marks)
ISA - 2	CBT (40 Marks -> 20 Marks)
ESA	Pen & Paper (100 Marks -> 60 Marks)
<b>UE18CS254 – Theory of Computation</b>	
<b>Anchor: Dr. Pooja Agarwal</b>	
<b><u>Pattern:</u></b>	
<b>ISA – 40 Marks (ISA – 1 + ISA – 2 + Assignment)</b>	
<b>ESA – 60 Marks</b>	
ISA -1	CBT (40 Marks -> 15 Marks)
ISA - 2	CBT (40 Marks -> 15 Marks)
Assignment	10 Marks
ESA	Pen & Paper (100 Marks -> 60 Marks)

### **Laboratory**

<b>UE18CS255 – Design and Analysis of Algorithms</b>	
<b>Anchor: Prof. Preethi P</b>	
<b><u>Pattern:</u></b>	
<b>ISA – 60 Marks (Observation + Conduction + Viva)</b>	
<b>ESA – 40 Marks</b>	
ISA	Observation – 10 Marks
	Conduction – 40 Marks
	Viva – 10 Marks
FSA	FSA quiz (20 Marks)
	Viva (20 Marks)
<b>UE18CS256 – Microprocessor and Computer Architecture</b>	
<b>Anchor: Prof. Roopa Ravish</b>	
<b><u>Pattern:</u></b>	
<b>ISA – 60 Marks (Observation + Conduction + Viva + Project)</b>	
<b>ESA – 40 Marks</b>	
ISA	Observation – 10 Marks
	Conduction – 25 Marks
	Project – 20 Marks
	Viva – 5 Marks
FSA	FSA quiz (20 Marks)
	Conduction (20 Marks)

## Special Topic

<b>UE18CS257A – Web Frameworks</b>		<b>Anchor: Prof. Vidhu Rojit</b>
<b>Pattern:</b> <b>ISA – 20 Marks (ISA – 1 + Assignment + Quiz)</b> <b>ESA – 30 Marks</b>		
ISA - 1	20 Marks -> 10 Marks	
Assignment	10 Marks -> 5 Marks	
Quiz	5 Marks	
ESA	Pen & Paper (50 Marks -> 15 Marks) + Project (15 Marks)	
<b>UE18CS257B – Android Application Development</b>		<b>Anchor: Prof. Silviya Nancy J</b>
<b>Pattern:</b> <b>ISA – 20 Marks (ISA – 1 + ISA - 2)</b> <b>ESA – 30 Marks (Written Exam + Project)</b>		
ISA - 1	CBT (20 Marks -> 10 Marks)	
ISA - 2	CBT (20 Marks -> 10 Marks)	
ESA	Pen & Paper (50 Marks -> 20 Marks) + Project (10 Marks)	
<b>UE18CS257C – Secure Programming with C</b>		<b>Anchor: Prof. Nagasundari S</b>
<b>Pattern:</b> <b>ISA – 30 Marks (ISA – 1 + ISA – 2 + Lab &amp; Assignment)</b> <b>ESA – 20 Marks</b>		
ISA -1	CBT (20 Marks -> 10 Marks)	
ISA - 2	CBT (20 Marks -> 10 Marks)	
Lab & Assignment	10 Marks	
ESA	Pen & Paper (50 Marks -> 20 Marks)	
<b>UE18CS257D – Fine Techniques</b>		<b>Anchor: Prof. N S Kumar</b>
<b>Pattern:</b> <b>ISA – 30 Marks (ISA – 1 + ISA – 2)</b> <b>ESA – 20 Marks</b>		
ISA – 1 & ISA - 2	Assignment 1 & Assignment 2 & Assignment 3 (30 Marks)	
ESA	CBT – MCQs (20 Marks -> 10 Marks) + Mini-Project (10 Marks)	
<b>UE18CS257E – Matlab for Image Processing</b>		<b>Anchor: Prof. Chandravva Hebbit</b>
<b>Pattern:</b> <b>ISA – 30 Marks (ISA – 1 + ISA – 2 + Project)</b> <b>ESA – 20 Marks</b>		
ISA -1	CBT (20 Marks -> 10 Marks)	

ISA - 2	CBT (20 Marks -> 10 Marks)
Project	10 Marks
ESA	Pen & Paper (50 Marks -> 20 Marks)
<b>UE18CS208A – Operation Linux</b>	
<b>Anchor: Prof. Ajoy Kumar</b>	
<b><u>Pattern:</u></b>	
<b>ISA – Assignments</b>	
<b>ESA – Written exam + Project</b>	
ISA	Assignment 1 (20 Marks) & Assignment 2 (20 Marks)
ESA	Project (40 Marks) + Pen & Paper exam (20 Marks)

Chairperson, CSE