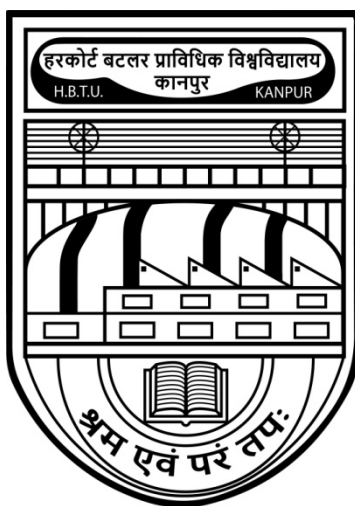


**SEMESTER WISE COURSE STRUCTURE
&
EVALUATION SCHEME**

**MASTER OF COMPUTER APPLICATION
(Effective from the session 2017-18 for new entrants)**



**HARCOURT BUTLER TECHNICAL UNIVERSITY
KANPUR-208002 (UP) – INDIA**

SEMESTER WISE COURSE STRUCTURE & EVALUATION SCHEME
MASTER OF COMPUTER APPLICATION
(FULL TIME PROGRAMME)

SEMESTER I

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MSE	TA	Lab	Total		
1.	PCC	ECA 401	Computer Concepts & Programming in C	5 (3-1-2)	15	20	15	50	50	100
2.	PCC	ECA 403	Computer Organization	4 (3-1-0)	30	20	-	50	50	100
3.	HSMC	HHS 403	Accounting & Financial Management	4 (3-1-0)	30	20	-	50	50	100
4.	HSMC	HHS 401	Professional Communication	3 (2-0-2)	15	20	15	50	50	100
5.	BSC	BMA 401	Discrete Structures	4 (3-1-0)	30	20	-	50	50	100
Total Credits				20						

SEMESTER II

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MSE	TA	Lab	Total		
1.	PCC	ECA 402	Data Structures Using C	5 (3-1-2)	15	20	15	50	50	100
2.	PCC	ECA 404	Operating Systems	4 (3-1-0)	30	20	-	50	50	100
3.	BSC	BMA 402	Computer Oriented Numerical & Statistical Techniques	4 (3-0-2)	15	20	15	50	50	100
4.	HSMC	HHS 404	Organisational Structure & Human Resource Management	4 (3-1-0)	30	20	-	50	50	100
5.	BSC	ECE 404	Environmental Science & Ethics	3 (3-0-0)	30	20		50	50	100
Total Credits				20						

SEMESTER III

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MSE	TA	Lab	Total		
1.	PCC	ECA 501	Software Engineering	5 (3-1-2)	15	20	15	50	50	100
2.	PCC	ECA 503	Design & Analysis of Algorithms	4 (3-1-0)	30	20	-	50	50	100
3.	PCC	ECA 505	Database Management Systems	4 (3-0-2)	15	20	15	50	50	100
4.	PCC	ECA 507	E-Commerce	3 (3-0-0)	30	20	-	50	50	100
5.	PCC	ECA 509	Internet & Java Programming	4 (3-0-2)	15	20	15	50	50	100
Total Credits				20						

SEMESTER IV

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MSE	TA	Lab	Total		
1.	PCC	ECA 502	Object Oriented System Modeling	5 (3-1-2)	15	20	15	50	50	100
2.	PCC	ECA 504	Computer Graphics & Animation	4 (3-0-2)	15	20	15	50	50	100
3.	PCC	ECA 506	Artificial Intelligence	3 (3-0-0)	30	20	-	50	50	100
4.	PCC	ECA 508	Computer Networks	4 (3-1-0)	30	20	-	50	50	100
5.	PEC	PEC I	PEC-I	4 (3-1-0)	30	20	-	50	50	100
Total Credits				20						

BSC- Basic Science Course; PCC-Programme Core course; PEC-Programme Elective Course; HSMC-Humanities, Social Science & Management Course

SEMESTER V

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MSE	TA	Lab	Total		
1.	PCC	ECA 601	Software Project Management	4 (3-0-2)	15	20	15	50	50	100
2.	PCC	ECA 603	Data Warehousing & Mining	4 (3-0-2)	15	20	15	50	50	100
3.	PCC	ECA 605	Mobile Computing	4 (3-1-0)	30	20	-	50	50	100
4.	PEC	PEC II	PEC-II	4 (3-1-0)	30	20	-	50	50	100
5.	PEC	PEC III	PEC-III	4 (3-1-0)	30	20	-	50	50	100
Total Credits				20						

SEMESTER VI

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MSE	TA	Lab	Total		
1.	Project	ECA 698	Project	20 (0-0-40)	-	50	-	50	50	100
Total Credits				20						

Total Programme Credit : 120

Department of Computer Science and Engineering
Master of Computer Application
List of Programme Elective to be offered in IV & V Semester

Programme Elective-I

S. No.	Course Code	Course Name	Credits
1.	ECA 512	Compiler Design	4 (3-1-0)
2.	ECA 514	Simulation & Modeling	4 (3-1-0)
3.	ECA 516	Information Security & Cyber Laws	4 (3-1-0)
4.	ECA 518	Internet of Things	4 (3-1-0)

Programme Elective-II

S. No.	Course Code	Course Name	Credits
1.	ECA 611	Cloud Computing	4 (3-1-0)
2.	ECA 613	Machine Learning	4 (3-1-0)
3.	ECA 615	Digital Image Processing	4 (3-1-0)
4.	ECA 617	Big Data Analytics	4 (3-1-0)

Programme Elective-III

S. No.	Course Code	Course Name	Credits
1.	ECA 631	Advanced Database Management Systems	4 (3-1-0)
2.	ECA 633	Software Quality Engineering	4 (3-1-0)
3.	ECA 635	Cryptography & Network Security	4 (3-1-0)
4.	ECA 637	Soft Computing	4 (3-1-0)