Shram Sadhana Bombay Trust's
COLLEGE OF ENGINEERING & TECHNOLOGY
BAMBHORI, POST BOX NO. 94, JALGAON- 425001. (M.S.)
Included Under Section 2(f) & 12(B) of the UGC Act, 1956
ISO 9001:2015 Certified

November 2021

ELECTIVE COURSE SYSTEM

<u>INDEX</u>

1.2.1: Percentage of Programmes in which elective course system has been implemented

Students are provided with Elective courses having access to excellent curricular and co-curricular opportunities for enhancing academic acumen, employability and entrepreneurial skills.

Teachers encourage the students to opt from the available electives. Students can select subjects from professional electives and open electives as per their choice. Programs offer courses relevant to recent technologies and development.

Kavayitri Bahinabai Chaudhari
NORTH MAHARASHTRA UNIVERSITY, JALGAON (M.S.)

Third Year Engineering
(Computer Engineering)

Faculty of Science and Technology

1990
'A' Grade
NAAC Re-Accredited
3rd Cycle

SYLLABUS STRUCTURE
Semester – V&VI
W.E.F. 2020 – 21

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon (M.S.)

Syllabus Structure for Third Year Engineering (Semester – V) (Computer) (w.e.f. 2020 – 21)
(As per AICTE Guidelines)

| Name of the Course | Group | Teaching Scheme | | | | Evaluation Scheme | | | | Total | Credits |
| | | Theory Hrs / week | Tutorial Hrs / week | Practical Hrs / week | Total | Theory | | Practical | | | |
						ISE	ESE	ICA	ESE		
Database Management Systems **	D	3	-	-	3	40	60	-	-	100	3
Software Engineering **	D	3	-	-	3	40	60	-	-	100	3
Formal Language and Automata Theory**	D	3	-	-	3	40	60	-	-	100	3
Professional Elective Course – I	E	3	-	-	3	40	60	-	-	100	3
Open Elective Course – I	F	3	-	-	3	40	60	-	-	100	3
Database Management Systems Lab**	D	-	-	2	2	-	-	25	25 (PR)	50	1
Software EngineeringLab**	D	-	-	2	2	-	-	25	25 (OR)	50	1
Web Programming Language Lab **	D	-	-	2	2	-	-	25	25 (PR)	50	1
Minor Project (Stage – I) **	G	-	-	6	6	-	-	50	-	50	3
Constitution of India **	H	-	-	-	-	-	-	-	-	-	-
		15	0	12	27	200	300	125	75	700	21

ISE: Internal Sessional Examination   **ESE: End Semester Examination**   **ICA: Internal Continuous Assessment**

	Professional Elective Course – I		Open Elective Course – I
1	Artificial Intelligence **	1	Operations Research**
2	Advanced Computer Architecture **	2	Renewable Energy Sources **
3	Computer Graphics	3	Cyber Law and Ethics**
4	Information Theory and Coding	4	E-waste Management**

** Common subjects with T.E. I.T.

Syllabus Structure for Third Year Engineering (Semester – VI) (Computer) (w.e.f. 2020 – 21)

(As per AICTE Guidelines)

Name of the Course	Group	Teaching Scheme				Evaluation Scheme				Total	Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical			
						ISE	ESE	ICA	ESE		
Operating Systems**	D	3	-	-	3	40	60	-	-	100	3
Computer Networks**	D	3	-	-	3	40	60	-	-	100	3
Design and Analysis of Algorithms**	D	3	-	-	3	40	60	-	-	100	3
Professional Elective Course – II	E	3	-	-	3	40	60	-	-	100	3
Open Elective Course – II	F	3	-	-	3	40	60	-	-	100	3
Operating Systems Lab**	D	-	-	2	2	-	-	25	25 (PR)	50	1
Computer Networks Lab**	D	-	-	2	2	-	-	25	25 (PR)	50	1
Design and Analysis of Algorithms Lab **	D	-	-	2	2	-	-	25	-	25	1
Minor Project **	G	-	-	6	6	-	-	50	25 (OR)	75	3
Internship – II *	H	-	-	-	-	-	-	-	-	-	-
		15	0	12	27	200	300	125	75	700	21

ISE: Internal Sessional Examination   **ESE: End Semester Examination**   **ICA: Internal Continuous Assessment**

	Professional Elective Course – II		Open Elective Course – II
1	Neural Networks **	1	Project Management**
2	Embedded Systems**	2	Managing Innovation and Entrepreneurship**
3	Image Processing	3	Supply Chain Management-Planning**
4	Software Metrics & Quality Assurance	4	Information Sources and Literacy**

* Internship - II is a mandatory and non-credit course. It shall be during summer vacation after Semester – VI. The satisfactory completion of Internship should be submitted to University at the end of Semester – VIII.

** Common subjects with T.E. I.T.

Kavayitri Bahinabai Chaudhari
NORTH MAHARASHTRA UNIVERSITY, JALGAON (M.S.)

Final Year Engineering
(Computer Engineering / Information Technology)

Faculty of Science and Technology

1990
'A' Grade
NAAC Re-Accredited
3rd Cycle

SYLLABUS STRUCTURE
Semester – VII & VIII
W.E.F. 2020 – 21

Syllabus Structure for Final Year Engineering (Semester – VII) (Computer / Information Technology) (w.e.f. 2020 – 21)

Name of the Course	Group	Teaching Scheme				Evaluation Scheme					Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical		Total	
						ISE	ESE	ICA	ESE		
Complier Design	D	3	-	-	3	40	60	-	-	100	3
Professional Elective Course – III	E	3	-	-	3	40	60	-	-	100	3
Professional Elective Course – IV	E	3	-	-	3	40	60	-	-	100	3
Open Elective Course – III	F	3	-	-	3	40	60	-	-	100	3
Complier Design Lab	D	-	-	2	2	-	-	25	25 (PR)	50	1
Advanced Technology Lab - I	D	1	-	2	3	-	-	25	25 (PR)	50	2
Project (Stage – I)	G	-	-	12	12	-	-	50	50 (OR)	100	6
Essence of Indian Traditional Knowledge	H	-	-	-	-	-	-	-	-	-	-
		13		16	29	160	240	100	100	600	21

ISE: Internal Sessional Examination   **ESE: End Semester Examination**   **ICA: Internal Continuous Assessment**

	Professional Elective Course – III		Professional Elective Course – IV		Open Elective Course – III
1	Machine Learning	1	Data Mining	1	Human Resource Management
2	Internet of Things	2	Distributed Systems	2	Industrial Engineering
3	Ad-Hoc and Sensor Networks	3	Cloud Computing	3	Quantitative Reasoning and Problem Solving
4	Virtual Reality	4	Human Computer Interaction	4	Entrepreneurship Development

Syllabus Structure for Final Year Engineering (Semester – VIII) (Computer / Information Technology) (w.e.f. 2020 – 21)

Name of the Course	Group	Teaching Scheme				Evaluation Scheme				Total	Credits
		Theory Hrs / week	Tutorial Hrs / week	Practical Hrs / week	Total	Theory		Practical			
						ISE	ESE	ICA	ESE		
Cyber Security	D	3	-	-	3	40	60	-	-	100	3
Professional Elective Course – V	E	3	-	-	3	40	60	-	-	100	3
Professional Elective Course – VI	E	3	-	-	3	40	60	-	-	100	3
Open Elective Course – IV	F	3	-	-	3	40	60	-	-	100	3
Cyber Security Lab	D	-	-	2	2	-	-	25	25 (OR)	50	1
Advanced Technology Lab - II	D	2	-	2	4	-	-	25	25 (PR)	50	3
Project	G		-	6	6	-	-	50	50 (OR)	100	3
		14	0	10	24	160	240	100	100	600	19

ISE: Internal Sessional Examination   **ESE: End Semester Examination**   **ICA: Internal Continuous Assessment**

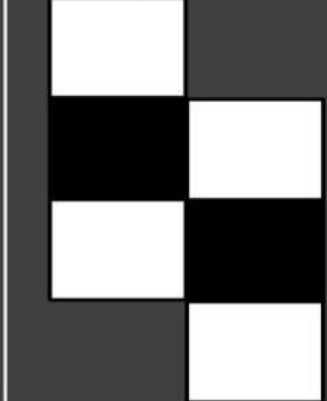|	Professional Elective Course – V		Professional Elective Course – VI		Open Elective Course – IV
1	Soft Computing	1	Data Analytics	1	Ethical Practices in Business
2	Advanced Operating Systems	2	Blockchain	2	Total Quality Management
3	Mobile Computing	3	Quantum Computing	3	Logical Reasoning and Problem Solving
4	Business Analytics and Intelligence	4	Information Retrieval	4	Robotics

2. Elective Course – Management (PG)

North Maharashtra University, Jalgaon
NAAC Reaccredited 'A' Grade University

MBA

FACULTY OF COMMERCE & MANAGEMENT

Structure, Equivalence and Syllabus

of

Master in Business Administration

(MBA)-I

(Semester 60-40 pattern)

w.e.f AY 2017-18

North Maharashtra University, Jalgaon

(NAAC Reaccredited 'A' Grade University)

FACULTY OF COMMERCE and MANAGEMENT

STRUCTURE OF MASTER IN BUSINESS ADMINISTRATION (M.B.A.)

w.e.f. AY 2017-18

Paper	Semester-I and II w.e.f. AY 2017-18 Semester-I	Paper	Semester-II
101	Management Science	201	Business Research Methods
102	Corporate Communication Skills	202	Information Technology For Managers
103	Managerial Economics	203	Global Economic Scenario
104	Human Resource Management	204	Marketing Management
105	Business Accounting and Costing	205	Financial Management
106	Organizational Behavior -I	206	Organizational Behavior– II
107	Corporate Social Responsibility	207	Services Management
108	Statistics and Quantitative Methods	208	Operations Management

Paper	Semester-III and IV w.e.f .AY 2018-19 Semester-III	Paper	Semester-IV
301	Strategic Management	401	Business and Government
302	Management Information Systems	402	Innovation Management
303	Legal Aspects Of Business	403	Indian Commercial Laws
304	Specialization-I	404	Entrepreneurship and Project Management
305	Specialization-II	405	Specialization-V
306	Specialization-III	406	Specialization-VI
307	Specialization-IV	407	Specialization -VII
308	Field Work/ Survey Report	408	Project Report

	Specialization (Any One)
A	Financial Management
B	Marketing Management
C	Human Resource Management
D	Production and Operations Management
E	International Business Management
F	Agro Business Management
G	Information Technology and Systems Management
H	Retail Management

	A - Financial Management		
304	Banking and Investment Management	405	Financial Derivatives
305	Tax Management	406	International Financial Management
306	Strategic Financial Management	407	Case Studies in Financial Management
307	Tally and Advanced Excel	408	Project Report and Viva-Voce
	B - Marketing Management		
304	Product and Brand Management	405	Marketing Research and Business Analytics
305	Consumer Behavior and Service Marketing	406	Retail Management and Digital Marketing
306	Sales and Distribution	407	Case Studies in Marketing
307	Global Marketing Management	408	Project Report and Viva-Voce
	C - Human Resource Management		
304	Industrial Relations and Labour Welfare	405	Performance and Compensation Management
305	Human Capital Management and Development	406	International HRM
306	Strategic Human Resource Management	407	Case Studies in HRM
307	Labour Laws	408	Project Report and Viva-Voce
	D - Production and Operations Management		
304	World Class manufacturing and Process Management	405	Industrial and Productivity Management
305	Management of Technology	406	International Quality Management
306	Logistics and Supply Chain Management	407	Case Studies in Production and operations Management
307	Operations Research	408	Project Report and Viva-Voce
	E - International Business Management		
304	International Business	405	International HRM and Diversity Management
305	International Logistics and Supply Chain Management	406	International Marketing Management
306	Export Import Management	407	Case Studies in IBM
307	International Marketing Management	408	Project Report and Viva-Voce
	F - Agro Business Management		
304	Agro Business Management	405	Rural Development
305	Management of Agro Based Industries	406	Agro Entrepreneurship and Project Management
306	Management in Finance and Agri-Business	407	Case Studies in Agro-Business Management
307	Agricultural Marketing	408	Project Report and Viva-Voce
	G - Information Technology and Systems Management		
304	HTML and Website Management	405	Information System Audit
305	Computer Networks	406	ICT and Business Application
306	RDBMS	407	Software Project Management
307	Software Engineering	408	Project Report and Viva-Voce
	H – Retail Management		
304	Introduction to Retail Management	405	International Retailing
305	Retail Promotion and Consumer Behavior	406	Information Technology in Retail Management
306	Retail Supply Chain Management	407	Case Studies in Retail Management
307	Mall Management	408	Project Report and Viva-Voce

North Maharashtra University, Jalgaon

(NAAC Reaccredited 'A' Grade University)

FACULTY OF COMMERCE and MANAGEMENT

STRUCTURE OF MASTER IN BUSINESS ADMINISTRATION (M.B.A.)

			Semester-I and II								
Paper	Semester-I	Credit	Maximum marks			Paper	Semester-II	Credit	Maximum marks		
			Int.	Ext.	Total				Int.	Ext.	Total
101	Management Science	4	40	60	100	201	Business Research Methods	4	40	60	100
102	Corporate Communication Skills	4	40	60	100	202	Information Technology For Managers	4	40	60	100
103	Managerial Economics	4	40	60	100	203	Global Economic Scenario	4	40	60	100
104	Human Resource Management	4	40	60	100	204	Marketing Management	4	40	60	100
105	Business Accounting and Costing	4	40	60	100	205	Financial Management	4	40	60	100
106	Organizational Behavior -I	4	40	60	100	206	Organizational Behavior– II	4	40	60	100
107	Corporate Social Responsibility	4	40	60	100	207	Services Management	4	40	60	100
108	Statistics and Quantitative Methods	4	40	60	100	208	Operations Management	4	40	60	100
	Total Maximum Marks	32	320	480	800		Total Maximum Marks	32	320	480	800

			Semester-III and IV								
Paper	Semester-III	Credit	Maximum marks			Paper	Semester-IV	Credit	Maximum marks		
			Int.	Ext.	Total				Int.	Ext.	Total
301	Strategic Management	4	40	60	100	401	Business and Government	4	40	60	100
302	Management Information Systems	4	40	60	100	402	Innovation Management	4	40	60	100
303	Legal Aspects Of Business	4	40	60	100	403	Indian Commercial Laws	4	40	60	100
304	Specialization-I	4	40	60	100	404	Entrepreneurship and Project Management	4	40	60	100
305	Specialization-II	4	40	60	100	405	Specialization-V	4	40	60	100
306	Specialization-III	4	40	60	100	406	Specialization-VI	4	40	60	100
307	Specialization-IV	4	40	60	100	407	Specialization -VII	4	40	60	100
308	Field Work/ Survey Report	4	40	60	100	408	Project Report	4	40	60	100
	Total Maximum Marks	32	320	480	800		Total Maximum Marks	32	320	480	800

North Maharashtra University, Jalgaon
(NAAC Reaccredited 'A' Grade University)

FACULTY OF COMMERCE and MANAGEMENT

EQUIVALENCE OF OLD AND NEW COURSES FOR

MASTER IN BUSINESS ADMINISTRATION (M.B.A.)

Old Paper	Old courses (w.e.f.- July 2014)	New Paper	New courses (w.e.f.- AY 2017-18)
Semester-I			
101	Management Science	101	Management Science
102	Corporate Communication Skills	102	Corporate Communication Skills
103	Managerial Economics	103	Managerial Economics
104	Human Resource Management	104	Human Resource Management
105	Business Accounting	105	Business Accounting and Costing
106	Organizational Behavior -I	106	Organizational Behavior -I
107	Corporate Social Responsibility	107	Corporate Social Responsibility
108	Quantitative Techniques	108	Statistics and Quantitative Methods
Semester - II			
201	Business Research Methods	201	Business Research Methods
202	Information Technology For Managers	202	Information Technology For Managers
203	Global Economics Scenario	203	Global Economic Scenario
204	Marketing Management	204	Marketing Management
205	Management Accounting	207	Services Management
206	Organizational Behavior – II	206	Organizational Behavior– II
207	Financial Management	205	Financial Management
208	Operations Management	208	Operations Management
Semester - III			
301	Strategic Management	301	Strategic Management
302	Management Information System and ERP	302	Management Information Systems
303	Legal Aspects Of Business	303	Legal Aspects Of Business
304	Specialization-I	304	Specialization-I
305	Specialization-II	305	Specialization-II
306	Specialization-III	306	Specialization-III
307	Specialization-IV	307	Specialization-IV
308	Field Work/ Survey Report	308	Field Work/ Survey Report
Semester - IV			
401	Current Business Scenario	401	Business and Government
402	e-Commerce and Excellence Management	402	Innovation Management
403	Indian Commercial Laws	403	Indian Commercial Laws
404	Entrepreneurship and Project Management	404	Entrepreneurship and Project Management
405	Specialization-V	405	Specialization-V
406	Specialization-VI	406	Specialization-VI
407	Specialization-VII	407	Specialization -VII
408	Project Report and Viva-Voce	408	Project Report and Viva-Voce