

Study & Evaluation Scheme

of

Department of Humanities and Social Sciences (Hons) (Specialization in Economics)

[Applicable for 2018- 21]

Version 2018

[As per CBCS guidelines given by UGC]



Approved in BOS	Approved in BOF	Approved in Academic Council
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Quantum University, Roorkee
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Quantum University, Roorkee
Study & Evaluation Scheme
Study Summary

Name of the Faculty	Faculty of Graduate Studies
Name of the School	Quantum School of Graduate Studies
Name of the Department	Department of Humanities & Social Sciences
Program Name	Bachelor of Arts (Hons) (Specialization in Economics)
Duration	3 Years
Medium	English

Evaluation Scheme

Type of Papers	Internal Evaluation (%)	End Semester Evaluation(%)	Total (%)
Theory	40	60	100
Practical/ Dissertations/Project Report/ Viva-Voce	40	60	100
<i>Internal Evaluation Components (Theory Papers)</i>			
Sessional Examination I	50 Marks		
Sessional Examination II	50 Marks		
Assignment –I	25 Marks		
Assignment-II	25 Marks		
Attendance	50 Marks		
<i>Internal Evaluation Components (Practical Papers)</i>			
Quiz One	25 Marks		
Quiz Two	25 Marks		
Quiz Three	25 Marks		
Lab Records/ Mini Project	75 Marks		
Attendance	50 Marks		
<i>End Semester Evaluation (Practical Papers)</i>			
ESE Quiz	30 Marks		
ESE Practical Examination	50 Marks		
Viva- Voce	20 Marks		

Structure of Question Paper (ESE Theory Paper)

The question paper will consist of 5 questions, one from each unit. Students have to Attempt all questions. All questions carry 20 marks each. Parts a) and b) of question Q1 to Q5 will be compulsory and each part carries 2 marks. Parts c), d) and e) of Q1 to Q5 carry 8 marks each and the student may attempt any 2 parts.

Important Note:

- 1. The purpose of examination should be to assess the Course Outcomes (CO) that will ultimately lead to attainment of Programme Outcomes (POs). A question paper must assess the following aspects of learning: Remember, Understand, Apply, Analyze, Evaluate & Create (reference to Bloom's Taxonomy). The standard of question paper will be based on mapped BL level complexity of the unit of the syllabus, which is the basis of CO attainment model adopted in the university.*
- 2. Case Study is essential in every question paper (wherever it is being taught as a part of pedagogy) for evaluating higher-order learning. Not all the courses might have case teaching methods used as pedagogy.*
- 3. There shall be continuous evaluation of the student and there will be a provision of real time reporting on QUMS. All the assignments will be evaluated through modules available on ERP for time and access management of the class*



Program Structure – Bachelor of Arts (Hons)
(Specialization in Economics)

Introduction

Bachelor of Arts (Hons)(Specialization in Economics) syllabus is a broad and multidisciplinary course consisting of several subjects such as Micro Economics, Macro Economics, Mathematical Economics, Agricultural Economics, Development Economics, International Economics, Industrial Economics.

All the above subjects are designed in such a way that students are able to perceive and retain the knowledge related to economics. There are a number of subjects that are offered in order to enhance employability and entrepreneurial ability among the students. The course is designed to produce graduates trained in the application of knowledge in economics to real-life economic, financial, ethical and analytical problems encountered in the economy. It is structured to provide the students with the skills and professional acumen to become key players in the economy irrespective of their future job places and task diversification they would take up. The course may enable the students to effectively apply their knowledge and skills to situations of economic, institutional and policymaking both in governance and industry.

The course has a rigorous focus on quantitative techniques and research methods which will orient the students in dealing with economic problems with a practical and analytical approach. The diversity and the spread of the course ensure that the students receive sufficient experience of the current issues and crises of the world, especially that of the emerging economies.

It's focused on the fundamental principles, theories and applications of economics. The programme includes qualitative and quantitative courses in economics, such as Indian economics, microeconomics, macroeconomics, economic statistics, etc.



It is a multidisciplinary trade-based field focusing on the application of business economics. Themes vary from financial management, corporate comportment, cost accounting to corporate communication, commercialization, and so forth. BA's Economics focuses mainly on demand and supply, Indian history, national incomes, inflation and deflation, production and supply, etc. Economics as a topic works primarily with extensive data. Therefore, statistics are vital in the curriculum.

Experiential Learning Programme (ELP)/ Hands on Training (HOT)

This program will be undertaken by the students preferably at the end of 5th semester for a total duration of 6 weeks with a weightage of 0+2 credit hours.

Curriculum (2018- 21) Version 2018

Quantum School of Graduate Studies

Bachelor of Arts (Hons) (Specialization in Economics) – PC: 03-3-08

BREAKUP OF COURSES

Sr. No	CATEGORY	CREDITS
1	Foundation Core (FC)	8
2	Program Core (PC)	77
3	Program Electives (PE)	24
4	Open Electives (OE)	9
5	Project	5
6	Internship	-
7	Value Added Programs (VAP)	9
8	General Proficiency (GP)	5
9	Disaster Management*	2*
TOTAL NO. OF CREDITS		137

*Non-CGPA Audit Course

SEMESTER-WISE BREAKUP OF CREDITS

Sr. No	CATEGORY	SEM	SEM	SEM	SEM	SEM	SEM	TOTAL
		1	2	3	4	5	6	
1	Foundation Core	6	2	-	-	-	-	8
2	Program Core	16	17	15	13	8	8	77
3	Program Electives	-	-	-	-	12	12	24
4	Open Electives	-	3	3	3	-	-	9
5	Project	-	-	-	3	-	2	5
6	Internship	-	-	-	-	-	-	-
7	VAPs	2	2	1	1	1	2	9
8	GP	1	1	1	1	1	-	5
9	Disaster Management*	-	2*	-	-	-	-	2*
	TOTAL	25	27	20	21	22	24	137

*Non-CGPA Audit Course

Minimum Credit Requirements:

Bachelor of Arts (Hons) Economics: 137 credits

**SEMESTER 1**

Course Code	Category	Course Title	L	T	P	C	Version	Course Prerequisite
EM3101	FC	Computer Applications in Business	3	0	2	4	1.0	Nil
PS3101	FC	Human Values & Ethics	2	0	0	2	1.0	Nil
EM3102	PC	Principles of Microeconomics	3	1	0	4	1.0	Nil
EM3103	PC	Economic History of India	4	0	0	4	1.0	Nil
EG3101	PC	Communicative English	3	1	0	4	1.0	Nil
PS3106	PC	Fundamental Psychological Processes I	3	1	0	4	1.0	Nil
VP3101	VP	Communication and Professional Skill - I	2	0	0	2	1.0	Nil
GP3101	GP	General Proficiency	0	0	0	1	1.0	Nil
		TOTAL	18	3	4	25		

Contact Hrs: 25

SEMESTER 2

Course Code	Category	Course title	L	T	P	C	Version	Course Prerequisite
CY3205	FC	Environmental Studies	2	0	0	2	1.0	Nil
EM3202	PC	Principles of Macroeconomics	3	1	0	4	1.0	EM3102
EM3203	PC	Statistical Tools in Economics	4	1	0	5	1.0	Nil
EM3204	PC	Business Environment	4	0	0	4	1.0	Nil
PS3206	PC	Fundamental Psychological Processes II	3	1	0	4	1.0	PS3106
	OE	Open Elective I	3	0	0	3	1.0	Nil
VP3201	VP	Communication & Professional Skills- II	1	0	2	2	1.1	Nil
GP3201	GP	General Proficiency	0	0	0	1	1.0	Nil
CE3201	FC	Disaster Management*	2*	0	0	2*	1.0	Nil
		TOTAL	22	3	2	27		

*Non-CGPA Audit Course

Contact Hrs =27

Open Elective I

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CE3011	OE	Carbon Emission & Control	3	0	0	3	1.0	Nil
CS3021	OE	Mining and Analysis of Big data	3	0	0	3	1.0	Nil
AG3011	OE	Ornamental Horticulture	3	0	0	3	1.0	Nil
BB3011	OE	Entrepreneurial Environment in India	3	0	0	3	1.0	Nil
JM3011	OE	Media Concept and Process (Print and Electronic)	3	0	0	3	1.0	Nil
HM3011	OE	Indian Cuisine	3	0	0	3	1.0	Nil
MB3011	OE	SAP 1	3	0	0	3	1.0	Nil
EG3011	OE	French Beginner A1	3	0	0	3	1.0	Nil
MT3011	OE	Elementary Robotics	0	0	5	3	1.0	Nil

SEMESTER 3

Course Code	Category	Course Title	L	T	P	C	Version	Course Prerequisite
MA3106	PC	Elements of Mathematics	3	2	0	4	1.1	Nil
EM3302	PC	Advance Macroeconomics	3	0	0	3	1.0	Nil
EM3303	PC	Development Economics	4	0	0	4	1.0	Nil
EM3304	PC	Introduction to Developmental Psychology	4	0	0	4	1.0	Nil
	OE	Open Elective II	3	0	0	3	1.0	Nil
VP3301	VP	Communication & Professional Skills- III	1	0	0	1	1.0	Nil
GP3301	GP	General Proficiency	0	0	0	1	1.0	Nil
		TOTAL	17	2	2	20		

Contact Hrs = 21

Open Elective II

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CE3013	OE	Environment Pollution and Waste Management	3	0	0	3	1.0	Nil
CS3023	OE	Big Data Analytics: HADOOP Framework	3	0	0	3	1.0	Nil
AG3013	OE	Organic farming	3	0	0	3	1.0	Nil
BB3013	OE	Establishing a New Business	3	0	0	3	1.0	Nil
JM3013	OE	Photo Journalism	3	0	0	3	1.0	Nil
HM3013	OE	Chinese Cuisine	3	0	0	3	1.0	Nil
MB3013	OE	SAP 3	3	0	0	3	1.0	Nil
EG3013	OE	French Intermediate B1	3	0	0	3	1.0	Nil
EG3002	OE	Report Writing	3	0	0	3	1.0	Nil
MT3013	OE	Introduction to Automation	3	0	0	3	1.0	Nil

SEMESTER 4

Course Code	Category	Course title	L	T	P	C	Version	Course Prerequisite
EM3401	PC	Economics of Public Finance	5	0	0	5	1.0	Nil
EM3402	PC	International Economics	4	0	0	4	1.0	Nil
EM3403	PC	Industrial Economics	4	0	0	4	1.0	Nil
EM3470	PC	Project I	3	0	0	3	1.0	Nil
	OE	Open Elective III	3	0	0	3	1.0	Nil
VP3401	VP	Reasoning Ability	0	0	2	1	1.0	Nil
GP3401	GP	General Proficiency	0	0	0	1	1.0	Nil
		TOTAL	19	0	2	21		

Contact Hrs = 21
Open Elective III

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CE3015	OE	Hydrology	3	0	0	3	1.0	Nil
CS3025	OE	Data Science Models: Regression, Classification and Clustering	3	0	0	3	1.0	Nil
AG3015	OE	Mushroom Cultivation	3	0	0	3	1.0	Nil
BB3015	OE	E-commerce	3	0	0	3	1.0	Nil
JM3015	OE	Media industry and Management	3	0	0	3	1.0	Nil
HM3015	OE	Italian Cuisine	3	0	0	3	1.0	Nil
MB3015	OE	SAP 5	3	0	0	3	1.0	Nil
EG3015	OE	French Advance C1	3	0	0	3	1.0	Nil
MT3015	OE	Robotic Industry 4.0	3	0	0	3	1.0	Nil

SEMESTER 5

Course Code	Category	Course Title	L	T	P	C	Version	Course Prerequisite
EM3501	PC	Research Methodology	4	0	0	4	1.0	Nil
EM3502	PC	Techniques in Decision Making	4	0	0	4	1.0	Nil
	PE	Program Elective-I	6	0	0	6	1.0	Nil
	PE	Program Elective-II	6	0	0	6	1.0	Nil
VP3501	VAP	Numerical Ability	0	0	2	1	1.0	Nil
GP3501	GP	General Proficiency	0	0	0	1	1.0	Nil
		TOTAL	20	0	2	22		

Contact Hours = 22

SEMESTER 6

Course Code	Category	Course Title	L	T	P	C	Version	Course Prerequisite
EM3601	PC	Money and Financial Market	4	0	0	4	1.0	Nil
EM3602	PC	Economics of Marketing	4	0	0	4	1.0	Nil
	PE	Program Elective-III	6	0	0	6	1.0	Nil
	PE	Program Elective-IV	6	0	0	6	1.0	Nil
EM3640	PC	Project	2	0	0	2	1.0	Nil
VP3601	VAP	GDPI	2	0	0	2	1.0	Nil
		TOTAL	22	0	2	24		

Contact Hours = 24

PROGRAM ELECTIVES

Program Elective	S.N	Course Code	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
I	1	EM3516	Financial Economics	6	0	0	6	1.0	Nil
	2	EM3517	Game Theory	6	0	0	6	1.0	Nil
II	1	EM3518	Basic Econometrics	6	0	0	6	1.0	Nil
	2	EM3519	Law & Economics	6	0	0	6	1.0	Nil
III	1	EM3616	Health Economics	6	0	0	6	1.0	Nil
	2	EM3617	Political Economics	6	0	0	6	1.0	Nil
IV	1	EM3618	Applied Econometrics	6	0	0	6	1.0	EM3518
	2	EM3619	Economics Sociology	6	0	0	6	1.0	Nil



B. Choice Based Credit System (CBCS)

Choice Based Credit System (CBCS) is a versatile and flexible option for each student to achieve his target number of credits as specified by the UGC and adopted by our university.

The following is the course module designed for the B.A. (H) (Economics) program:

Core competency: Students will acquire core competency in Economics and in allied subject areas.

Program/Discipline Specific Elective Course (DSEC):

Skilled communicator: The course curriculum incorporates basics and advanced training in order to make a graduate student capable of expressing the subject through technical writing as well as through oral presentation.

Critical thinker and problem solver: The course curriculum also includes components that can be helpful to graduate students to develop critical thinking ability by way of solving problems/numerical using basic & advance knowledge and concepts of Economics.

Sense of inquiry: It is expected that the course curriculum will develop an inquisitive characteristic among the students through appropriate questions, planning and reporting experimental investigation.

Skilled project manager: The course curriculum has been designed in such a manner as to enabling a graduate student to become a skilled project manager by acquiring knowledge about mathematical project management, writing, planning, study of ethical standards and rules and regulations pertaining to scientific project operation.

Ethical awareness/reasoning: A graduate student requires understanding and developing ethical awareness/reasoning which the course curriculums adequately provide.

Lifelong learner: The course curriculum is designed to inculcate a habit of learning continuously through use of advanced ICT technique and other available techniques/books/ journals for personal academic growth as well as for increasing employability opportunity.

Value Added Course (VAC): A value added audit course is a non-credit course which is basically meant to enhance general ability of students in areas like soft skills, quantitative aptitude and reasoning ability - required for the overall development of a student and at the same time crucial for industry/corporate demands and requirements. The student possessing these skills will definitely develop acumen to perform well during the recruitment process of any premier organization and will have the desired confidence to face the interview. Moreover, these skills are also essential in day-to-day life of the corporate world. The aim is to nurture every student for making effective communication, developing aptitude and a general reasoning ability for a better performance, as desired in corporate world. There shall be four courses of Aptitude in Semester I, II, III & IV semesters and two courses of Soft Skills in III & IV Semesters and will carry no credit, however, it will be compulsory for every student to pass these courses with minimum

45% marks to be eligible for the certificate. These marks will not be included in the calculation of CGPI. Students have to specifically be registered in the specific course of the respective semesters.

Skill Enhancement Course: This course may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

Generic/ Open Elective Course (OE): Open Elective is an interdisciplinary additional subject that is compulsory in a program. The score of Open Elective is counted in the overall aggregate marks under Choice Based Credit System (CBCS). Each Open Elective paper will be of 3 Credits in III, IV and VI semesters. Each student has to take Open/Generic Electives from department other than the parent department. Core / Discipline Specific Electives will not be offered as Open Electives.

Non CGPA/ Audit Course (NCAC): This is a compulsory course but not included in the CGPA calculations and will be of 2 credits. Each student of B.A. (h) Economics Program has to compulsorily pass the Environmental Studies and Human values & professional Ethics and Disaster Management..

C. Program Outcomes of Bachelor of Arts (Hons) Economics

PO 1	Critical Thinking	Take informed decisions after acknowledging the assertions that guide our thinking and behavior, evaluating the degree to which these assumptions are true and defensible, and considering our concepts and decisions (intellectual, organizational, and personal) from various viewpoints.
PO 2	Effective Communication	Make sense of the world by connecting people, ideas, books, media, and technology. Speak, read, write, and listen clearly in person and through electronic media in English and one Indian language.
PO 3	Social Interaction	Generate other people's opinions, resolve conflicts, and aid in group decision-making.
PO 4	Effective Citizenship	Demonstrate the ability to act with informed awareness of concerns, care about equity in national development, and engage in civic life through volunteering.
PO 5	Ethics	Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO 6	Environment and Sustainability	Recognize the problems with sustainable development and environmental settings.
PO 7	Self-directed and Life-long Learning	Develop the capacity for independent, ongoing learning in the context of socio-technical transformations.
PO 8	Coping Strategies	Empower the students in dealing with issues and problems of self and others.
PO 9	Research abilities	Apprise with methodological intricacies in research and application.
PO 10	Taking up Challenges	Capable of accepting the challenges of individual and group life.



D. Program Specific Outcomes (PSO's):

PSO1: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of management and sciences

PSO2: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PSO3: Create, select, and apply appropriate techniques, resources, and modern management and IT tools including prediction and modeling to complex business activities with an understanding of the limitations.

E. Program Educational Objectives (PEO's)

PEO1. To develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling.

PEO2. They will have basic knowledge on qualitative research techniques.

PEO3. They will have an adequate knowledge on measurement & scaling techniques as well as the quantitative data analysis.

PEO4. They will have a basic awareness of data analysis-and hypothesis testing procedures.

F. Pedagogy & Unique practices adopted:

“Pedagogy is the method and practice of teaching, especially for teaching an academic subject or theoretical concept”. In addition to conventional time-tested lecture method, the institute will emphasize on experiential learning:

Role Play & Simulation: Role-play and simulation are forms of experiential learning. Learners take on different roles, assuming a profile of a character or personality, and interact and participate in diverse and complex learning settings. Role-play and simulation function as learning tools for teams and groups or individuals as they "play" online or face-to-face. They alter the power ratios in teaching and learning relationships between students and educators, as students learn through their explorations and the viewpoints of the character or personality they are articulating in the environment. This student-centered space can enable learner-oriented assessment, where the design of the task is created for active student learning. Therefore, role-play & simulation exercises such as virtual share trading, marketing simulation etc. are being promoted for the practical-based experiential learning of our students.

Video Based Learning (VBL) & Learning through Movies (LTM): These days technology has taken a front seat and classrooms are well equipped with equipment and gadgets. Video-based learning has become an indispensable part of learning. Similarly, students can learn various concepts through movies. In fact, many teachers give examples from movies during their discourses. Making students learn few important theoretical concepts through VBL & LTM is a good idea and method. The learning becomes really interesting and easy as videos add life to concepts and make the learning engaging and effective. Therefore, our institute is promoting VBL & LTM, wherever possible.

Field/Live Projects: The students, who take up experiential projects in companies, where senior executives with a stake in teaching guide them, drive the learning. All students are encouraged to do some live project other than their regular classes.

Industrial Visits: Industrial visits are essential to give students hand-on exposure and experience of how things and processes work in industries. Our institute organizes such visits to enhance students' exposure to practical learning and work out for a report of such a visit relating to their specific topic, course or even domain.

MOOCs: Students may earn credits by passing MOOCs as decided by the college. Graduate level programs may award Honors degree provided students earn prerequisite credits through MOOCs. University allows students to undertake additional subjects/course(s) (In-house offered by the university through collaborative efforts or courses in the open domain by various internationally recognized universities) and to earn additional credits on successful completion of the same. Each course will be approved in advance by the University following the standard procedure of approval and will be granted credits as per the approval. Keeping this in mind, University proposed and allowed a maximum of two credits to be allocated for each MOOC course. In the pilot phase it is proposed that a student undertaking and successfully completing a MOOC course through only NPTEL could be given 2 credits for each MOOC course.

For smooth functioning and monitoring of the scheme the following shall be the guidelines for MOOC courses, Add-on courses carried out by the College from time to time.

- a) It will be necessary for every student to take at least one MOOC Course throughout the programme.
- b) There shall be a MOOC co-ordination committee in the College with a faculty at the level of Professor heading the committee and all Heads of the Department being members of the Committee.
- c) The Committee will list out courses to be offered during the semester, which could be requested by the department or the students and after deliberating on all courses finalize a list of courses to be offered with 2 credits defined for each course and the mode of credit consideration of the student. The complete process shall be obtained by the College before end of June and end of December for Odd and Even semester respectively of the year in which the course is being offered. In case of MOOC course, the approval will be valid only for the semester on offer.
- d) Students will register for the course and the details of the students enrolling under the course along with the approval of the Vice Chancellor will be forwarded to the Examination department within fifteen



days of start of the semester by the Coordinator MOOC through the Principal of the College.

- e) After completion of MOOC course, Student will submit the photo copy of Completion certificate of MOOC Course to the Examination cell as proof.
- f) Marks will be considered which is mentioned on Completion certificate of MOOC Course.
- g) College will consider the credits only in case a student fails to secure minimum required credits then the additional subject(s) shall be counted for calculating the minimum credits required for the award of degree.

Special Guest Lectures (SGL) & Extra Mural Lectures (EML): Some topics/concepts need extra attention and efforts as they either may be high in difficulty level or requires experts from specific industry/domain to make things/concepts clear for a better understanding from the perspective of the industry. Hence, to cater to the present needs of industry we organize such lectures, as part of lecture-series and invite prominent personalities from academia and industry from time to time to deliver their vital inputs and insights.

Student Development Programs (SDP): Harnessing and developing the right talent for the right industry an overall development of a student is required. Apart from the curriculum teaching various student development programs (training programs) relating to soft skills, interview skills, SAP, Advanced excel training etc. that may be required as per the need of the student and industry trends, are conducted across the whole program. Participation in such programs is solicited through volunteering and consensus.

Industry Focused programmes: Establishing collaborations with various industry partners to deliver the programme on sharing basis. The specific courses are to be delivered by industry experts to provide practice-based insight to the students.

Special assistance program for slow learners & fast learners: write the note how would you identify slow learners, develop the mechanism to correcting knowledge gap. Terms of advance topics what learning challenging it will be provided to the fast learners.

Induction program: Every year 3 weeks induction program is organized for 1st year students and senior students to make them familiarize with the entire academic environment of university



including Curriculum, Classrooms, Labs, Faculty/ Staff members, Academic calendar and various activities.

Mentoring scheme: There is Mentor-Mentee system. One mentor lecture is provided per week in a class. Students can discuss their problems with mentor who is necessarily a teaching faculty. In this way, student's problems or issues can be identified and resolved.

Competitive exam preparation: Students are provided with one class in every week for GATE/ Competitive exams preparation.

Extra-curricular Activities: organizing & participation in extracurricular activities will be mandatory to help students develop confidence & face audience boldly. It brings out their leadership qualities along with planning & organizing skills. Students undertake various cultural, sports and other competitive activities within and outside then campus. This helps them build their wholesome personality.

Career & Personal Counseling: - Identifies the problem of student as early as possible and gives time to discuss their problems individually as well as with the parents. Counseling enables the students to focus on behavior and feelings with a goal to facilitate positive change. Its major role lies in giving: Advice, Help, Support, Tips, Assistance, and Guidance.

Participation in Flip Classes, Project based Learning (A2 Assignment), Workshops, Seminars & writing & Presenting Papers: Departments plan to organize the Flip Classes, Project based Learning (A2 Assignment), workshops, and Seminars & Guest lecturers time to time on their respective topics as per academic calendar. Students must have to attend these programs. This participation would be count in the marks of general Discipline & General Proficiency which is the part of course scheme as non-credit course.

Formation of Student Clubs, Membership & Organizing & Participating events: Every department has the departmental clubs with the specific club's name. The entire student's activity would be performed by the club. One faculty would be the coordinator of the student clubs & students would be the members with different responsibility.

Capability Enhancement & Development Schemes: The Institute has these schemes to enhance the capability and holistic development of the students. Following measures/ initiatives are taken up from time to time for the same: Career Counseling, Soft skill development, Remedial Coaching, Bridge Course, Language Lab, Yoga and Meditation, Personal Counseling

Library Visit & Utilization of QLRC: Students may visit the library from morning 10 AM to evening 8 PM. Library created its resources Database and provided Online Public Access Catalogue (OPAC) through which users can be accessed from any of the computer connected in the LAN can know the status of the book. Now we are in process to move from OPAC to KOHA.



Detailed Syllabus (Semester wise /course wise)
SEMESTER 1 Year -1

EM3101	Title: Computer Applications in Business	L T P C 3 0 2 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The basic objective of this course is to provide fundamental knowledge to develop Computer skills among students.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Introduction to Computers	8
Introduction, characteristics, Advantages, Types and Applications of computers, Input/output Devices, Computer Memories and Binary number System.		
Unit II	Introduction to Windows	7
Components of Application Windows, Concept of window, Types of Windows, Windows as an Operating System, Basic Features and functioning. User interfaces- CUI and GUI.		
Unit III	Internet & Its Usage	6
Applications of Internet, Introduction to Internet, Growth of Internet, ISP, Anatomy of Internet, World Wide Web, Internet Protocols, Usage of Internet to Society and Search Engines.		
Unit IV	Introduction to essential tools: MS Word & PowerPoint	13
Introduction to Word Processing and power point: Concept, features, mail merge, header and footers, Practical working on Word document. Introduction to power point and its feature, preparation of power point presentation, Role of effects in slides.		
Unit V	Spread Sheet & its Business Application	10
Concept of M. S. Excel: Introduction to Spreadsheet Concepts and its feature, Editing, Inserting, Deleting Work Sheets. Using of Formulae bar and Preparing chart.		
Text Books	1. Sanjay Saxena, A First Course in Computers, Vikas Publishing House, New Delhi. 2. Pradeep K. Sinha and Preeti Sinha, Foundation of Computing, BPB ,Publication.	
Reference Books	1. Microsoft Office Home and Student 2010, Joyce Cox,Microsoft Press. 2. PC Software for Windows, R.K. Taxali, Tata Mc Graw Hill, Gologtia Publications, latest edition. 3. V. Rajaraman, Introduction to Information Technology, PHI. New Delhi.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3101

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Students will gain knowledge on programming and write pseudo-code.	2	None
CO2	Students will be able to choose the right data representation formats based on the requirements of the problem.	2	None
CO3	Students will be able to use the comparisons and limitations of the various programming constructs and choose the right one for the task in hand.	3	S
CO4	Students will be able to write the program on a computer, edit, compile, debug, correct, recompile and run it.	3	S
CO5	Students will be able to identify tasks in which the numerical techniques learned are applicable and apply them to write programs, and hence use computers effectively to solve the task.	3	S

CO-PO Mapping for EM3101

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO 1	PSO 2	PSO 3
CO 1	3	0	0	3	1	1	0	2	2	3	0	3	0
CO 2	2	3	0	2	2	1	1	1	0	0	2	1	2
CO 3	3	2	2	2	2	2	3	0	0	2	1	0	0
CO 4	2	1	2	3	2	2	3	1	2	2	0	2	2
CO 5	0	0	0	0	2	1	0	3	1	1	2	2	2
Avg	2	1.2	1.4	2	1.8	1.4	1.4	1.4	1	1.6	1	1.6	1.2

PS3101	Title: Human Values & Ethics	L T P C 2 0 0 2
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	To facilitate the development of a holistic perspective among students towards life and profession as well as towards happiness and prosperity based on a correct understanding of the human reality and the rest of Existence	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Introduction of Value Education	5
1. Understanding the need, basic guidelines, content and process of Value Education 2. A look at basic Human Aspirations: Self Exploration–its content and process		
Unit II	Understanding Harmony - Harmony in Myself!	5
1. Thoughtful human being in harmony; as a co-existence of the sentient, attitude and its importance in relationship. 2. Understanding the needs, characteristics and activities of Self ('I')		
Unit III	Understanding Harmony in the Family and Society	5
1. Harmony in the family; values in human relationships; meaning of Nyaya , Trust (Vishwas) and Respect (Samman) as the foundation values of relationships.2. Harmony in society:Samadhan, Samridhi, Abhay, Sah-astitva as comprehensive Human Goals.		
Unit IV	Understanding Harmony in the Nature and Existence	4
1. Understanding the harmony in Nature: Interconnectedness among the four orders of nature- recyclability and self-regulation in nature 2. Natural perception of harmony at all levels of existence		
Unit V	Understanding Professional Ethics	5
1. Competencies in professional ethics: a) Ability to utilize the professional competence for augmenting universal human order b) Ability to identify the scope and characteristics of people-friendly and eco-friendly production systems, c) Ability to identify and develop appropriate technologies and management patterns for above production systems.		
Text Books	1. R.R Gaur, R Sangal, G P Bagaria, A foundation course in Human Values and Professional Ethics, Excel books, New Delhi	
Reference Books	1. A.N. Tripathy, Human Values, New Age International Publishers 2. B L Bajpai, Indian Ethos and Modern Management, New Royal Book Co., Lucknow 2. B P Banerjee, Foundations of Ethics and Management, Excel Books	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For PS3101

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Students will understand the significance of value inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and process of value education, explore the meaning of happiness and prosperity and do a correct appraisal of the current scenario in the Society	2	None
CO2	Distinguish between the Self and the Body, understand the meaning of Harmony in the Self the Coexistence of Self and Body.	2	S
CO3	Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human relationships and explore their role in ensuring a harmonious society.	2	S
CO4	Understand the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.	2	S
CO5	Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.	2	S

CO-PO Mapping for PS3101

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	0	0	2	0	1	2	2	1	1	1	2	0	1
CO2	2	2	1	2	1	0	1	1	1	1	2	1	1
CO3	2	1	2	0	3	1	0	2	2	1	0	3	1
CO4	2	0	0	2	3	2	2	2	2	3	1	2	3
CO5	1	2	3	1	3	2	3	1	0	0	2	2	0
Avg	1.4	1	1.6	1	2.2	1.4	1.6	1.4	1.2	1.2	1.4	1.6	1.2

EM3102	Title: Principles of Microeconomics	L T PC 3 1 04
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The objective is to develop the conceptual foundations and analytical methods used in micro economics and to expose the students to the basic principles of Micro economic environment.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Exploring Micro economics and Consumer Behaviors	12
Why study economics? the economic problem: scarcity and choice, central problems, concept of PPC, Theory of consumer behavior: Cardinal and Ordinal Utility analysis and Consumer's equilibrium. Indifference curve and its properties, Law of Demand, inferior goods and giffen goods, derivation of demand curve. Elasticity of demand – price, income and cross elasticities and their measurements.		
Unit II	Producer's behavior and Supply	10
Production decisions; Production function; law of variable proportions; returns to scale; characteristics of Isoquants, Factor substitution; least cost combination of factors, Internal and external economies and diseconomies, concept of supply- supply function, elasticity of supply and its measurement.		
Unit III	Cost Analysis and Revenue	8
Cost Analysis: Concepts of costs, short period costs and long period costs, Modern Theory of costs, Concepts of revenue: Total, average and marginal revenue and their relationships, Break-even-analysis and its uses.		
Unit IV	Market structure and pricing theories	8
Market Structures, Perfect Competition: Characteristics and assumptions, Price determination under perfect competition, Equilibrium of the firm and industry in the short period and the long period. Imperfect Market: Monopolistic competition, price determination, Oligopoly: Characteristics, emergence of oligopoly, Price leadership, Collusive and non-collusive Oligopoly.		
Unit V	Factor pricing and its theories	6
Theory of factor pricing: Marginal productivity theory of distribution, Backward bending supply curve of labour, Ricardian and Modern theory of rent, quasi-rent, net and gross interest, Theories of interest, Classical and neoclassical; Net and gross profit, Theories of profit.		
Text Books	1. Gravelle and Rees- : Microeconomics; Pearson Education, 2ndEdition 2. G.S. Maddala and E. Miller. Micro economics. McGraw-Hill International Editions..	
Reference Books	1. Samuelson, P.A. and W.D. Nordhaus, Economics, Tata McGraw Hill, New Delhi 2. Varian, H.R. , Intermediate Microeconomics : A Modern Approach, East-West Press, New Delhi. 3. Henderson J. and R.E. Quandt , Microeconomic Theory: A Mathematical Approach, McGraw Hill, New Delhi. 4. Heathfield and Wibe , An Introduction to Cost and Production Functions, Macmillan, London	



Mode of Evaluation	Internal and External Examinations
Recommendation by Board of Studies on	03-03-2018
Date of approval by the Academic Council	06-11-2018

Course Outcome For EM3102

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Understand the fundament of Microeconomic concepts and get introduced to the framework for learning about consumer behavior and analyzing consumer decisions.	2	None
CO2	To study about firms behavior and their decisions about optimal production considering the different laws of production.	2	S
CO3	Understand the role played by cost and revenue in long run and short run and thus direct firms and industries for minimization of cost and maximization of revenue.	2	S
CO4	Analyze the performance of firms under different market structures and apply the knowledge in determination of optimum level of output at a optimum price level.	4	En
CO5	Analyze how factors prices were determined in factor input markets, leads to selection of best factor input by the producer.	4	None

CO-PO Mapping for EM3102

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	3	0	1	3	0	3	2	3	3	0	0	3	1
CO2	1	2	0	3	1	1	3	2	3	3	1	1	1
CO3	2	2	3	0	3	3	0	1	1	1	1	1	1
CO4	0	2	2	0	3	1	3	3	3	0	2	3	3
CO5	0	1	1	3	0	3	3	1	2	3	2	0	0
Avg	1.2	1.4	1.4	1.8	1.4	2.2	2.2	2	2.4	1.4	1.2	1.6	1.2

EM3103	Title: Economic History of India	LTPC 4004
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	After completing the course ,Students are expected to have good understanding Of the Indian Economy.	
UnitNo.	Unit Title	No. of hours (perUnit)
Unit I	Structure of Indian Economy	6
	Basic Features,HumanResourceDevelopment,Broaddemographicfeatures,Populationandeconomicdevelopment, Growth and structural changes in Gross Domestic Product, Five Year Plans: An overview, NITI Aayog: Objectives and functions.	
Unit II	Agriculture and Industry	10
	Causes of Flow productivity Indian agriculture, Institutional and Technological reforms, Agricultural Finance And marketing. Industrial growth in India.	
UnitIII	Industrial Policy and Foreign trade	12
	New Industrial policy, Privatization and disinvestment debate, Micro Small and Medium enterprises: problems andprospects,Foreign Trade:Trends,compositionanddirection;Causesandeffectsofpersistentdeficitinthebalanceof Payments ;Measures adopted by the government to correct the deficit in Balance of Payments before and after1991.	
UnitIV	Public Finance	8
	India's taxsystem;Ratioofdirectandindirecttaxes;Taxreformssince1991;GoodsandServicesTax(GST):featuresand progress; Public expenditure in India -classification and trends; Public debt in India classification, trends and management; Public debt and fiscal deficit in India.	
UnitV	Market	8
	Trends in agricultural production and productivity; Factors determining productivity; Institutional and technologicalreforms;Capitalformation;Agriculturalpricepolicy;FoodsecurityandPublicDistributionSystem;Ruralcreditandrole ofNABARD,	
TextBooks	1. Agarwal A.N: India Economy: Wishwa Prakashan 2. Bhalla,G.S.: 'IndianAgriculturesinceIndependence(2008),NBT.NewDelhi	
Reference Books	1.Kapila.:IndianEconomysinceIndependence Academic foundation, New Delhi	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3103

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Develop ideas of the basic characteristics of Indian economy, its potential on natural resources.	2	S
CO2	Understand agriculture as the foundation of economic growth and development.	2	S
CO3	Analyze the impact of new Industrial policies and foreign policies on the economy of India.	4	S
CO4	Understand the revolution in the taxation system of India and Attain the advantages and knowledge of public investments and other government expenditures.	3	S
CO5	Analyze the progress and changing nature of agricultural sector and its contribution to the economy as a whole	4	S

CO-PO Mapping for EM3103

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	1	0	3	1	3	3	2	3	0	0	0	2	1
CO2	0	2	2	0	3	2	2	3	2	2	1	3	2
CO3	2	1	3	3	0	0	3	1	1	3	2	0	0
CO4	2	0	3	3	1	3	1	0	2	3	1	0	0
CO5	2	2	0	2	1	3	2	2	1	2	1	2	3
Avg	1.4	1	2.2	1.8	1.6	2.2	2	1.8	1.2	2	1	1.4	1.2



EG3101	Title: Communicative English	L T P C 3 1 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The aim of this course is to introduce students to the theory, fundamentals and tools of communication and to develop in them vital communication skills	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Basics of Communication	8
Communication Process; Language as a Tool of Communication; Levels of Communication, Flow of Communication-vertical, horizontal, diagonal; Communication Networks.		
Unit II	Types Of Communication	7
Barriers to Communication; Technology in Communication; Verbal and Non-verbal Communication- Kinesics, Proxemics, Para linguistics : Spoken and written; Formal and Informal Style; Use of bias free English.		
Unit III	Grammar and Punctuation	7
Parts of Speech: Subject-Verb Agreement, Parallelism; Common Errors; Punctuation and Sentence Construction.		
Unit IV	Reading and Writing	7
Reading Comprehension; Précis-writing; Note making; Summarizing and Paragraph writing:		
Unit V	Listening	7
Active and Passive Listening; Types of listening; Importance Note-taking; Writing a Review; Dialogue; Listening comprehension.		
Text Books	1. Malti Agarwal, Basic Technical Communication, Krishna Prakashan Media (P)Ltd, Meerut.	
Reference Books	1. Fluency in English - Part II, Oxford University Press . 2. Vandana R Singh, The Written Word, Oxford University Press, New Delhi. 3. KK Ramchandran, et al, Business Communication, Macmillan, New Delhi. 4. Swati Samantaray, Business Communication and Commnicative English, Sultan Chand, New Delhi.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EG3101

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To enhance the learner's communication skills by giving adequate exposure in LSR listening, speaking, reading and writing skills and the related sub skills.	2	S
CO2	To help the learners recognize and operate in various styles and registers in English.	2	S
CO3	To help the learner get rid of his present flaws and mistakes in pronunciation and grammar.	2	S
CO4	To help the learner identify and repair the voids in his present vocabulary and pronunciation targeting those specific array of words which create a barrier in his thought process.	2	S
CO5	To impart better writing skills by sensitizing the learners to the dynamics of effective writing.	2	S

CO-PO Mapping for EG3101

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	1	0	1	2	1	3	1	3	2	3	1	3	3
CO 2	1	2	1	2	0	2	1	0	3	0	1	0	3
CO 3	1	1	2	0	3	3	2	2	2	1	3	1	3
CO 4	3	0	2	1	3	3	2	3	2	0	3	3	3
CO 5	1	2	3	0	3	0	3	2	0	2	2	2	3
Avg	1.4	1	1.8	1	2	2.2	1.8	2	1.8	1.2	2	1.8	3

PS3106	Title: Fundamental Psychological Processes I	L T P C 3 1 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	To help students acquire an appreciation for psychological concepts and an understanding of basic principles of human behavior.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Introduction	12
Cognitive Psychology-meaning and definition, the domains of Cognitive Psychology, a brief history of cognitive psychology, research methods in cognitive psychology, paradigms of cognitive psychology. Neuropsychological Basis of Cognition: Structure and functions of neuron, structures and functions of central and autonomic nervous system, techniques of studying the functions of the brain.		
Unit II	Perception	12
Perception- Sensation, the raw materials of understanding (brief description), the focus of our attention, the organizing principles, perceptual constancies and illusions, some key perceptual processes- pattern and distance, motion perception.		
Unit III	Learning	12
Learning: Learning- Meaning and definition of learning, Classical conditioning- basic principles, the neural basis of learning, a cognitive perspective, turning principles into action. Operant Conditioning- Nature, learning based on consequences, basic principles, schedules of reinforcement, biological constraints on learning, the cognitive perspective, applying the principles of operant conditioning. Observational Learning- basic principles, observational learning and aggression, practical applications.		
Text Books	1. Galloti, K.M. Cognitive Psychology: In and Out of Laboratory (3rd Edition), USA, Thomson Wadsworth. 2. Baron, R. A.. Psychology (5th Edition), New Delhi, Pearson Education.	
Reference Books	1. Feldman, R.S. Understanding Psychology (6th Edition), New Delhi, Tata Mc. Graw Hill Publishing Company Limited. 2. Morgan, C.T., King, R.A., Weisz, J.R., & Schopler, J. Introduction to psychology (7th edition) Bombay: Tata-McGrawHill.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For PS3106

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Students will understand basic psychological concepts: domains, history and scope of psychology	2	Em
CO2	Students will study about neuropsychology and brain structure and how they are involved with cognitive psychology.	2	S
CO3	Students will understand how psychology is different from philosophy and considered as science.	2	S
CO4	Students will be able to recognize and apply various perception and attention theories	2	En
CO5	Students will be able to apply different motivational theories to day to day life.	1	None

CO-PO Mapping for PS3106

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO7	PO 8	PO 9	PO1 0	PSO 1	PSO 2	PSO 3
CO 1	1	0	0	3	1	1	1	2	2	3	2	3	0
CO 2	3	2	2	2	1	3	0	2	3	3	0	1	3
CO 3	0	2	1	3	2	0	3	3	2	2	2	3	0
CO 4	1	2	0	3	2	1	3	0	0	1	1	3	2
CO 5	2	1	2	0	3	2	3	3	0	2	3	1	3
Avg	1.4	1.4	1	2.2	1.8	1.4	2	2	1.4	2.2	1.6	2.2	1.6

SEMESTER 2 YEAR- 1

CY3205	Title: Environmental Studies	L T P C 2 0 0 2
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	Creating awareness among engineering students about the importance of environment, the effect of technology on the environment and ecological balance is the prime aim of the course.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Introduction to Environmental studies & Ecosystems	5
Multidisciplinary nature of environmental studies, Scope and importance, Need for public awareness. Concept, Structure and function of an ecosystem, Energy flow in an ecosystem: food chains, food webs and ecological pyramids. Examples of various ecosystems such as: Forest, Grassland, Desert, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans and estuaries).		
Unit II	Natural Resources: Renewable & Non- renewable resources	5
Land as a resource, land degradation, landslides (natural & man-induced), soil erosion and desertification. Forests & forest resources: Use and over-exploitation, deforestation. Impacts of deforestation, mining, dam building on environment and forests. Resettlement and rehabilitation of project affected persons; problems and concerns with examples. Water resources: Use and over-exploitation of surface and ground water, floods, drought, conflicts over water (international & inter-state). Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems with examples. Energy resources: Renewable and non renewable energy sources, use of alternate energy sources and growing energy needs.		
Unit III	Biodiversity & Conservation	5
Levels of biological diversity: genetic, species and ecosystem diversity. Biogeographic zones of India. Ecosystem and biodiversity services. Biodiversity patterns and global biodiversity hot spots, India as a mega-biodiversity nation; Endangered and endemic species of India. Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions. Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.		
Unit IV	Environmental Pollution	4
Environmental pollution and its types. Causes, effects and control measures of: a) Air pollution b) Water pollution – freshwater and marine c) Soil pollution d) Noise pollution e) Thermal pollution. Nuclear hazards and human health risks, Solid waste management: Control measures of urban and industrial waste.		
Unit V	Environmental Policies & Practices	5
Concept of sustainability and sustainable development. Water conservation & watershed management. Climate change, global warming, acid rain, ozone layer depletion. Disaster management: floods, earthquake, cyclones and landslides. Wasteland reclamation. Environment Protection Act. Air (Prevention and Control of Pollution) Act. Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation. Environment: rights and duties. Population growth.		
Field work		



<input type="checkbox"/> Visit to a local polluted site-Urban/Rural/Industrial/Agricultural. <input type="checkbox"/> Study of simple ecosystems-pond, river, hill slopes, etc.	
Text Books	1. Bharucha. E, <u>Textbook of Environmental Studies for Undergraduate Courses</u> ,
Reference Books	1. Kaushik Anubha, Kaushik C P, Perspectives in Environmental Studies New Age Publication. 2. Rajagopalan , Environmental Studies from Crisis to Cure, Oxford University Press.
Mode of Evaluation	Internal and External Examinations
Recommendation by Board of Studies on	03-03-2018
Date of approval by the Academic Council	06-11-2018

Course Outcome For CY3205

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None <i>(Use , for more than One)</i>
CO1	Students should be able to correlate the human population growth and its trend to the environmental degradation and develop the awareness about his/her role towards environmental protection and preventions.	2	None
CO2	Students should be able to understand the solutions related to environmental problems related to renewable & nonrenewable resources.	2	S
CO3	Students should be able to understand the importance of ecosystem and biodiversity and the method of conservation of biological diversity.	2	S
CO4	Students should be able to understand different components of the environment and their function and the effects of pollution on the environment and should be able to understand the concept of sustainable development.	2	En
CO5	Students should be able to correlate the human population growth and its trend to the environmental degradation and develop the awareness about his/her role towards environmental protection and preventions.	2	None

CO-PO Mapping for CY3205

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2,Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO 1	PSO 2	PSO 3
CO 1	0	2	1	0	3	3	1	2	3	3	2	2	0
CO 2	1	0	2	0	0	1	0	0	1	3	3	3	3
CO 3	3	3	1	3	2	1	2	2	2	3	2	2	0
CO 4	3	2	1	2	3	0	1	0	3	3	2	0	2
CO 5	3	0	0	1	2	2	2	3	3	0	1	0	3
Avg	2	1.4	1	1.2	2	1.4	1.2	1.4	2.4	2.4	2	1.4	1.6



EM3202	Title: Principles of Macroeconomics	L T P C 3 1 0 4
Version No.	1.0	
Course Prerequisites	EM3102	
Objectives	The course aims to introduce the first year students to the concepts and approaches to the study of macroeconomics in the current century and develop the ability for objective reasoning about macroeconomic issues.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Introduction to Macroeconomics and National Income Accounting	8
Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; the Consumer Price Index: calculation of CPI, GDP deflator versus the CPI and real versus nominal interest rates.		
Unit II	Money and Banking system	7
Functions of money; quantity theory of money; determination of money supply and demand- credit creation; tools of monetary policy, Banking system in India- Functions of Commercial bank, functions of Central banks, Credit creation by commercial banks and central bank.		
Unit III	Theory of Income and Employment	7
Keynesian theory of Income and Employment, Aggregate Demand and Aggregate supply, Consumption function and Propensity to consume, Saving function and propensity to save, unemployment and its types, .Equilibrium level of income , output and employment.		
Unit IV	Investment Theories	7
Types of Investment, Determination of Level of Investment. Classical, Keynesian and Jorgenson's Neoclassical Theory of Investment, Saving-Investment Equality. Multiplier and Accelerator: Concept of Multiplier, Types of Multiplier, Investment Multiplier, Government Expenditure Multiplier, Income determination involving government expenditure and tax Multiplier, Leakages of Multiplier, Acceleration principle and Super Multiplier.		
Unit V	Govt. Budget and Balance of Payment	7
Budget components, Budgetary surplus and deficit, types of Budget deficit, Balance of payment and its different components, current account and capital account in BOP.		
Text Books	1. Sloman, John, Economics, 6th Ed., Pearson Education. 2. Hejdra,B.J. and F.V.Ploeg, . Foundations of Modern Macroeconomics, Oxford University Press, Oxford.	
Reference Books	1. Keynes, J.M.The General Theory of Employment, Interest and Money, Macmillan ,London. 2. Farmer, Roger.Macro economics, II Edition. ISBN. 3. Lewis, M.K. and P.D. Mizan , Monetary Economics, Oxford University Press, New Delhi	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies	03-03-2018	

on		
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3202

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Students will learn about the concepts of macroeconomics and understand the meaning and components of national income.	2	Em
CO2	Student will understand the process of money creation by the banking system and the role of the central bank.	2	S
CO3	Interpret macroeconomic events using aggregate demand and aggregate supply model, describe the interrelationships among prices, income, and interest rates as they affect consumption, savings and investment.	3	S
CO4	Students can analyze the work of different multiplier in an economy.	4	S
CO5	Students will learn about different budgetary components of Budget.	2	S

CO-PO Mapping for EM3202

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO7	PO 8	PO 9	PO1 0	PSO1	PSO 2	PSO 3
CO 1	2	0	3	1	3	1	1	2	1	3	2	3	0
CO 2	0	2	2	1	0	1	0	2	3	3	0	1	3
CO 3	0	1	3	2	2	3	3	3	2	2	2	3	0
CO 4	3	0	3	2	3	2	3	0	2	1	1	3	2
CO 5	2	2	0	3	2	3	3	3	3	2	3	1	3
Avg	1.4	1	2.2	1.8	2	2	2	2	2.2	2.2	1.6	2.2	1.6

EM3203	Title: Statistical Tools in Economics	L T P C 4 1 0 5
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The objective of this course is to familiarize students with the basic statistical Tools to apply on quantitative & qualitative data to summarize and analyze information for decision making.	
UnitNo.	Unit Title	No. of hours (perUnit)
Unit I	Introduction to Statistics	6
Nature, Scope and limitations of statistics, uses of statistics to business and industrial activities, Primary and secondary data, Collection of data, Classification and tabulation of data, Diagrammatic and graphic representation of data, Questionnaire – Its characteristics and drafting.		
Unit II	Statistical Data and Descriptive Statistics	12
Measures of Central Tendency: Mathematical Averages Including Arithmetic Mean, Properties and Applications. Positional Averages Mode, Median (and Other Partition Values Including Quartiles, Deciles, and Percentiles). Measures of Variation: Absolute and Relative. Range, Quartile Deviation, Mean Deviation, Standard Deviation.		
Unit III	Probability	11
Concepts of Probability, Addition and Multiplication rule, Conditional Probability and Baye's Theorem, Random Variable, Expectation and Variance of a Random Variable.		
Unit IV	Simple Correlation and Regression Analysis	12
Correlation Analysis: Meaning Simple Correlation; Linear Non-Linear, Causation and Correlation, Scatter Diagram, Pearson's Coefficient of Correlation; Calculation and Properties (Proofs not required). Probable and Standard Errors, Rank Correlation. Simple Regression Analysis: Principle of Least Squares and Regression Lines.		
Unit V	Index Numbers and Time Series	11
Index Numbers: Utility of Index Numbers. Problems in the Construction of Index Numbers, Simple and Weighted Index Number, Base Shifting, Fisher's Ideal Index Number and Reversibility Tests, Application of Index Numbers. Analysis of Economic Time Series: Component of Time Series, Calculation of Secular Trend, Moving Average method and Method of Least squares.		
TextBooks	1. S.P.Gupta, Business Statistics, S.Chand & Sons, New Delhi. 2. J.K. Thukral, Business Statistics, Taxman publication Ltd, New delhi.	
ReferenceBooks	1. D.N. Elhance, Fundamentals of Statistics, Kitab Mahal Publishers. 2. S.C. Sharma, Business Statistics, Arya Publishing Company.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3203

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Analyze statistical data graphically using frequency distributions and cumulative frequency distributions.	4	Em
CO2	Analyze statistical data using measures of central tendency, dispersion and location	4	S
CO3	Use the basic probability rules and Translate real-world problems into probability models	3	S
CO4	Calculate and interpret the correlation and regression between two or more variables. Employ the principles of linear regression and correlation, including least square method, predicting a particular value of Y for a given value of X and significance of the correlation coefficient.	3	S
CO5	Use the Index number concept to translate and solve real- word problem.	3	S

CO-PO Mapping for EM3203

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	1	2	3	3	2	0	0	1	2	1	2	0	2
CO2	3	3	3	0	1	3	2	3	0	0	3	3	3
CO3	0	3	2	2	2	2	2	0	3	3	3	0	2
CO4	1	3	0	3	2	3	0	1	0	1	0	2	0
CO5	2	0	3	2	0	2	3	2	0	0	2	0	2
Avg	1.4	2.2	2.2	2	1.4	2	1.4	1.4	1	1	2	1	1.8

EM3204	Title: Business Environment	LTPC 4004
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The basic objective of the course is to develop understanding and provide knowledge about business environment to the management students and to promote basic understanding on the concepts of Business Environment and to enable them to realize the impact of environment on Business.	
UnitNo.	Unit Title	No. of hours (per Unit)
Unit I	Introduction	9
Concept, Significance and Nature of Business Environment, Types of environment, Interaction between Internal and External Environments, Techniques for Environment Analysis, Significance of Environment Forecasting.		
Unit II	Economic Environment	10
Economic system and economic policies, Concept of Capitalism, Socialism and Mixed Economy, Planning in India: Emergence and Objective, Niti Aayog, MRTP & FEMA Act, Planning Monetary Policy, Fiscal Policy, Union Budget as an instrument of growth and its Impact on Business, Recent Development in New Economic Policy (1991) and its Impact on Business.		
Unit III	Politico-Legal Environment	9
Relationship between Business and Government, Entrepreneurial Roles of Government, Constitutional Provisions affecting Business, An over view of major laws affecting business, Social Responsibility of Business.		
Unit IV	Technological and Socio-Cultural Environment	9
Technological Environment: Factors Influencing Technological Environment, Role and impact of Technology on Business. Transfer of Technology- Channels, Methods and Limitations, Status of technology in India Demographic and Socio-Cultural Environment: Social Audit – Meaning and Importance of Corporate Governance, Population Size, Falling Birth Rate, Business and Society and Business Culture.		
Unit V	International Environment	8
Foreign Direct Investment, Foreign Institutional Investment, LPG model, SEZ, EPZ, GATT/WTO and India: an overview, MNCs in India, Regulation of Foreign Trade and Disinvestment in Public Sector Units.		
Textbooks	1. K. Aswathappa, Essentials of Business Environment: Text, Cases & Exercises, Himalaya Publishing House. 2. Francis Cherunilam, Business Environment: Text and Cases, Himalaya Publishing House.	
Reference Books	1. V. Neelamegam, Business Environment, Vrinda Publications. 2. Justin Paul, Business Environment: Text and Cases, McGraw Hill Education. 3. I. C. Dhingra, The Indian Economy: Environment and Policy, Sultan Chand & Sons. 4. Ian Brooks, Jamie Weather stom and Graham Wilkinson, International Business Environment, Prentice Hall.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3204

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To understand the concept, significance, and nature of the Business Environment.	2	Em
CO2	To learn different economic systems, economic policies and NITI Aayog.	2	S
CO3	Summarizing the relationship between business and government, constitutional provision affecting the business, etc.	3	S
CO4	Define the factors influencing the technological environment, role and impact of technology on business.	2	S
CO5	To learn foreign direct investment, foreign institutional investment, LPG model, etc.	2	S

CO-PO Mapping for EM3204

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	1	2	3	0	2	0	0	2	2	1	2	0	2
CO 2	3	3	1	2	1	3	2	2	0	0	3	3	3
CO 3	1	3	2	0	2	2	2	3	3	3	3	0	2
CO 4	1	3	3	2	2	3	0	3	0	1	0	2	0
CO 5	0	0	2	1	0	2	3	3	0	0	2	0	2
Avg	1.2	2.2	2.2	1	1.4	2	1.4	2.6	1	1	2	1	1.8

PS3206	Title: Fundamental Psychological Processes-II	L T P C 3 1 0 4
Version No.	1.0	
Course	PS3108	
Prerequisites		
Objectives	To help students to acquire an appreciation for psychological concepts in general and develop an understanding of basic principles of human behavior.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I-	Memory	12
The Atkinson and Shiffrin model, working memory, episodic memory, semantic memory, procedural memory. Forgetting- Due to decay, due to interference, forgetting and retrieval inhibition.		
Unit II	Intelligence	12
Nature and Theories of intelligence- Gardner, Sternberg, Das and Naglieri, measurement of intelligence, the cognitive and neural basis of intelligence, heredity, environment and intelligence.		
Unit III	Motivation & Emotion	12
Meaning and Definition of Motivation, Need, Drive and Incentives. Theories of motivation- Drive theory, Arousal theory, Expectancy theory, Maslow' sneed hierarchy theory. Forms of human needs and motivation- hunger, need for achievement, need for affiliation, need for power. Emotion: Nature and Definition of Emotion, Brief description of Cannon-Bard, James-Lange and Schachter-Singer theories of emotion; Expression of emotion.		
Text Books	1. Baron, R. A. Psychology (5th Edition). New Delhi, Pearson Education. 2. Feldman, R.S. Understanding Psychology (6th Edition). New Delhi, Tata Mc. Graw Hill Publishing Company Limited.	
Reference Books	1. Morgan, C.T., King, R.A., Weisz, J.R., & Schopler, J. Introduction to psychology (7thedition). Bombay, Tata-McGraw Hill.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For PS3206

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	The students actively learn to investigate dynamic interrelations of man and environment. Making students learn and understand the procedures of memory and how to improve memory.	2	Em
CO2	Psychology can be defined as a study of behavior, mind, and mental conditions of human beings. To this end Psychology involves study of mental processes, motives, reactions, feelings, conflict resolution, crisis management, group think, motivation, and nature of mind.	2	S
CO3	Aspiring students should possess the 3 P's of psychology1 Patience, Perseverance and Passion. These are the essentials to understand the patients. Moreover they should have scientific aptitude and analytical thinking to help in diagnosis and devise solutions for their maladies. Enhancing intelligence and learning different strategies of intensifying IQ.	2	S
CO4	The world is constantly changing in its social economic, political and cultural landscape thereby rendering human life more complex. These events continually impact human behavior producing depression and anxiety. Thus, psychology can help individuals to learn and adapt coping strategies.	2	S
CO5	The students will be able to learn the art of counseling and handling patients with different psychological problems and will be able to apply those practical aspects in their professional areas.	3	S

CO-PO Mapping for PS3206

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO7	PO 8	PO9	PO1 0	PSO1	PSO 2	PSO 3
CO 1	1	0	0	3	1	3	2	2	2	0	2	2	1
CO 2	3	2	2	2	1	0	3	1	3	1	1	1	1
CO 3	0	2	1	3	2	2	2	2	2	3	0	2	3
CO 4	1	2	0	3	2	3	0	1	0	3	2	1	2
CO 5	2	1	2	0	3	2	0	0	0	0	3	0	0
Avg	1.4	1.4	1	2.2	1.8	2	1.4	1.2	1.4	1.4	1.6	1.2	1.4

CE3201	Title: Disaster management	L T P C 2 0 0 2
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The course is intended to provide a general concept in the dimensions of disasters caused by nature beyond human control as well as the disasters and environmental hazards induced by human activities with emphasis on disaster preparedness, response and recovery.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit: 1	Introduction on Disaster	5
Different Types of Disaster : A) Natural Disaster: such as Flood, Cyclone, Earthquakes, Landslides etc B) Man-made disasters: such as Fire, Industrial Pollution, Nuclear Disaster, Biological Disasters, Accidents (Air, Sea, Rail & Road), Structural failures(Building and Bridge), War & Terrorism etc. Causes, effects and practical examples for all disasters.		
Unit II	Risk and Vulnerability Analysis	4
Risk : Its concept and analysis 2. Risk Reduction 3. Vulnerability: Its concept and analysis 4. Strategic Development for Vulnerability Reduction.		
Unit III	Disaster Preparedness	5
Disaster Preparedness: Concept and Nature. Disaster Preparedness Plan Prediction, Early Warnings and Safety Measures of Disaster. Role of Information, Education, Communication, and Training, Role of Government, International and NGO Bodies. . Role of IT in Disaster Preparedness. Role of Engineers on Disaster Management.		
Unit IV	Disaster Response	5
Introduction Disaster Response Plan Communication, Participation, and Activation of Emergency Preparedness Plan Search, Rescue, Evacuation and Logistic Management Role of Government, International and NGO Bodies Psychological Response and Management (Trauma, Stress, Rumor and Panic). Relief and Recovery Medical Health Response to Different Disasters.		
Unit V	Rehabilitation, Reconstruction and Recovery	5
Reconstruction and Rehabilitation as a Means of Development. Damage Assessment Post Disaster effects and Remedial Measures. Creation of Long-term Job Opportunities and Livelihood Options, Disaster Resistant House Construction Sanitation and Hygiene Education and Awareness, Dealing with Victims' Psychology, Long-term Counter Disaster Planning Role of Educational Institute.		
Text Books	1. Disaster Science and Management by Bhattacharya published in McGraw Hill Education (India) Pvt. Ltd.	
Reference Books	1. Disaster Management by Dr. Mrinalini Pandey published in Wiley India Pvt. Ltd. Tushar. 2. Disaster Management : Future Challenges and Opportunities by Jagbir Singh published in K W Publishers Pvt.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of	03-03-2018	

Studies on	
Date of approval by the Academic Council	06-11-2018

Course Outcome For CE3201

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Students will be able to understand the basic concepts of disasters and its relationships with development.	2	S
CO2	Students will be able to understand the approaches of Disaster Risk Reduction (DRR) and the relationship between vulnerability, disasters, disaster prevention and risk reduction.	2	S
CO3	Students will be able to understand the Medical and PsychoSocial Response to Disasters.	2	S
CO4	Students will be able to prevent and control Public Health consequences of Disasters	2	S
CO5	Students will have awareness of Disaster Risk Management institutional processes in India	2	S

CO-PO Mapping for CE3201

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	3	2	2	1	0	0	2	3	2	2	0	2	2
CO 2	1	2	3	3	1	0	1	0	1	1	2	3	1
CO 3	2	3	2	0	1	3	1	1	0	2	1	1	1
CO 4	2	1	3	1	1	3	0	1	2	1	3	3	2
CO 5	3	2	0	1	3	2	3	0	3	0	0	0	2
Avg	2.2	2	2	1.2	1.2	1.6	1.4	1	1.6	1.2	1.2	1.8	1.6

SEMESTER 3 YEAR 2

MA3106	Title: Elements of Mathematics	LTPC 3 2 0 4
Version No.	1.1	
Course Prerequisites	Nil	
Objectives	To impart the knowledge of Trigonometry, Matrices and theory of Equations.	
Unit No.	Unit Title	No. of hours(per Unit)
Unit I	Trigonometry	8
Introduction to inverse circular and hyperbolic functions and their properties. Logarithm of a complex quantity. Gregory's series. Summation of trigonometric series, Difference method, C+I S method.		
Unit II	Matrix and Algebra	8
Elementary Operations on matrices. Inverse of a matrix. Linear dependence and independence of rows and columns of matrices. Row rank and column rank of a matrix. Rank of matrix, Eigen values, and eigenvectors of matrix. Minimal polynomial of a matrix. Cayley Hamilton theorem and its application.		
Unit III	System of Equations	8
Solution of matrices to a system of linear (both homogeneous and non-homogeneous) equations. Theorems on consistency of a system of linear equations.		
Unit IV	Theory of Equations	6
Existence of root of equation, Descartes's rule, general polynomial equation in one variable.		
Unit V	Solution of Equations	6
Solutions of cubic equations (Cardano's method). Biquadratic equations and their solutions.		
Textbooks	1. Chandrika Prasad, Text Book on Algebra and Theory of Equations. Pothishala Private Ltd., Allahabad 2. S.L. Loney, Plane Trigonometry Part-II, Macmillan and Company, London	
Reference Books	1. Shanti Narayan, A Text Book of Matrices. 2. Chandrika Prasad, Text Book on Algebra and Theory of Equations. Pothishala Private Ltd., Allahabad. 3. S.L. Loney, Lane Trigonometry Part-II, Macmillan and Company, London.	
Mode of Evaluation	Internal and External Examination	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome for MA3106

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To understand the concepts of trigonometry and different methods for their summation..	2	S
CO2	To understand the concept of matrix and algebra.	2	S
CO3	To find out the solution of a matrix to a system of linear equations.	2	S
CO4	To bring out the existence of the root of the equation.	2	S
CO5	To find out solutions of cubic equations.	2	S

CO-PO Mapping for MA3106

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	2	2	1	2	2	2	3	2	1	2	3	3	1
CO 2	3	2	2	0	3	0	0	1	3	2	3	3	1
CO 3	2	3	3	3	3	3	0	1	0	0	1	1	3
CO 4	0	3	3	1	1	3	1	3	0	3	3	0	2
CO 5	0	0	2	1	2	3	3	2	3	1	2	3	0
Avg	1.4	2	2.2	1.4	2.2	2.2	1.4	1.8	1.4	1.6	2.4	2	1.4

EM3302	Title: Advance Macroeconomics	LTPC 3 0 0 3
Version No.	1.0	
Course Prerequisites	EM3201	
Objectives	The course aims to introduce the first year students to the advance concepts and approaches to the study of advance macroeconomics in the current century and develop the ability for objective reasoning about macroeconomic issues.	
Unit No.	Unit Title	No. of hours(per Unit)
Unit I	Review of Aggregate Supply-Aggregate Demand Model	10
Aggregate labor market, adaptive expectations, nominal wage rigidities; aggregate demand: review of IS-LM model, effectiveness of fiscal and monetary policy; adaptive expectations hypothesis and stability in the AS-AD model.		
Unit II	Rational Expectations and Implications for Economic Policy	10
Rational expectations hypothesis, policy ineffectiveness proposition; overlapping wage contracts.		
Unit III	Introduction to Dynamic Models	12
Dynamic investment theory, investment subsidy, dynamic IS-LM model; open economy and international financial markets, Dornbusch overshooting model.		
Unit IV	Economic Growth	12
Stylized facts; Solow-Swan model; Ramsey model: phase diagram, efficiency properties of the Ramsey model, fiscal policy in the Ramsey model; Ricardian equivalence, some reasons for non-equivalence; endogenous growth; some issues in growth for open economies.		
Unit V	Overlapping Generations Model	12
Diamond-Samuelson model: equilibrium, dynamics and stability, efficiency.		
Textbooks	1. Heijdra, Ben J., <i>The Foundations of Modern Macroeconomics</i> , Oxford University Press.	
Reference Books	1. Blanchard, Olivier Jean and Fischer, Stanley. <i>Lectures on Macroeconomics</i> , Prentice Hall of India Private Limited, 2. Barro, Robert J. and Sala-i-Martin, Xavier. <i>Economic Growth</i> , Prentice Hall of India Private Limited.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	

Date of approval by the Academic Council	06-11-2018
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Course Outcome For EM3302

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Evaluate and analyze the fluctuations in the goods and money market through the IS-LM model and deduce the exogenous normal rigidity in wage settlement.	4	S
CO2	Map the Rational Expectations and Implications for Economic Policy through different models.	4	S
CO3	Analyze the models of Investment and IS-LM in the dynamic situation of Open economy.	4	S
CO4	To understand the different theories of Economic growth under different market structures.	4	S
CO5	To understand and apply the overlapping generation model in the real economy.	4	S

CO-PO Mapping for EM3302

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	1	3	1	2	2	2	3	2	1	2	3	3	1
CO2	3	0	2	0	3	0	0	1	3	2	3	3	1
CO3	1	3	3	3	3	3	0	1	0	0	1	1	3
CO4	0	3	3	1	1	3	1	3	0	3	3	0	2
CO5	0	0	2	1	2	3	3	2	3	1	2	3	0
Avg	1	1.8	2.2	1.4	2.2	2.2	1.4	1.8	1.4	1.6	2.4	2	1.4

EM3303	Title: Development Economics	L T P C 4 0 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The course is intended to provide a general concept in the dimensions of economic development that deals with a discussion of alternative conceptions of development and their justification.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit:1	Conception of Development	9
Alternative measures of development, documenting the international variation in these measures, comparing development trajectories across nations and within them.		
Unit II	Growth Models and Empirics	9
The Harrod-Domar model, the Solow model and its variants, endogenous growth models and evidence on the determinants of growth.		
Unit III	Land, Labor and Credit Markets	9
The distribution of land ownership; land reform and its effects on productivity; contractual relationships between tenants and landlords; land acquisition; nutrition and labor productivity; informational problems and credit contracts; microfinance; inter linkages between rural factor markets.		
Unit IV	Demography and Development	9
Demographic concepts; birth and death rates, age structure, fertility and mortality; demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households; connections between income, mortality, fertility choices and human capital accumulation; migration.		
Unit V	Globalization	7
Globalization in historical perspective; the economics and politics of multilateral agreements; trade, production patterns and world inequality; financial instability in a globalized world.		
Textbooks	1. Debraj Ray, Development Economics, Oxford University Press. 2. Partha Dasgupta, Economics, A very Short Introduction, Oxford University Press.	
Reference Books	1. Democracy Can't Coexist, Oxford University Press. 2. Daron Acemoglu and James Robinson, Economic Origins of Dictatorship and Democracy, Cambridge University Press.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3303

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To Develop the ability to explain core development economics concepts and measures of economics change, growth, and development	3	S
CO2	To Develop the ability to explain core economic models.	3	S
CO3	To understand the concept of Land, Labor and Credit Markets	2	S
CO4	To understand the demographic concept of development economics.	2	S
CO5	To Demonstrate awareness of global, historical, and institutional forces.	3	S

CO-PO Mapping for EM3303

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	1	2	3	3	3	3	2	2	3	2	3	2	3
CO2	1	3	2	0	1	3	0	3	3	2	0	0	3
CO3	1	3	0	2	0	0	2	1	1	1	0	1	1
CO4	2	3	1	1	1	0	1	2	2	0	0	2	3
CO5	3	3	2	3	2	1	3	0	0	2	2	1	2
Avg	1.6	2.8	1.6	1.8	1.4	1.4	1.6	1.6	1.8	1.4	1	1.2	2.4

EM3304	Title: Introduction to Developmental Psychology	L T P C 4 0 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The basic objective of this course is to provide knowledge about human behavior in Indian cultural context and to apply psychological tools to assess the psychological profile of individuals.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Introduction to Basic Psychological Processes	9
Learning Processes: nature and factors of learning; theories: trial IS and error, conditioning - classical and operant; insight. Transfer of training, program learning, Memory and forgetting: Nature of encoding, storage and retrieval; STM LTM, types of memory, Nature and theories of forgetting.		
Unit II	Factors involvement in Psychological Development	9
Concept and definition of development, role of genetic and environmental factors in development, Lifespan Development Theoretical Perspectives in Lifespan Development, Types of Research in Lifespan Development Biological Beginnings & Prenatal Development, The Newborn, Infancy.		
Unit III	Psychological Factors in different Life Stages	8
Emotional, moral and social in each stage of life span, Personality-concept, development, assessment, Physical Development in Early Childhood Cognitive Development in Early Childhood Socio-emotional Development in Early Childhood.		
Unit IV	Assessment of Psychological Factors	8
Concept and assessment of Intelligence, Aptitude and Interest, Physical & Cognitive Development in Middle Childhood Socio-emotional Development in Middle Childhood, Physical & Cognitive Development in Adolescence Socio-emotional Development in Adolescence.		
Unit V	Educational Psychological Development	8
Understanding exceptional children-education of Gifted and intellectually disabled children, Early Adulthood Middle Adulthood, Biological Aging Cognitive Problems: Dementia Socio-emotional Development: Theories of Aging End of Life, Comprehensive—covers all modules.		
Text Books	1. Baron, R. A.: Psychology (5th Edition), Prentice-Hall of India Private Limited.. 2. Aggarwal, J.C.: Basic Ideas in Educational Psychology, Shipra Publication, Delhi.	
Reference Books	1. Hurlock E.B, Developmental Psychology: A Life-Span Approach, McGraw Hill Education. 2. Hurlock E.B, Child Development, McGraw Hill Education. 3. Melvin, H. M.M and William, A. H, Systems and Theories in Psychology, McGraw-Hill Higher Education. 4. Solso, R. L.,Maclin, H., and Maclin, M. K, Cognitive Psychology, Pearson Education	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of	03-03-2018	



Studies on	
Date of approval by the Academic Council	06-11-2018

Course Outcome For EM3304

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Be able to demonstrate a broad working knowledge of developmental psychology by providing an overview of basic principles related to biosocial, cognitive and psychosocial changes throughout the entire lifespan.	2	S
CO2	Be able to demonstrate an understanding of different stages of development through the lifespan.	2	S
CO3	Identify and apply developmental concepts to everyday Life	3	S
CO4	Demonstrate improved critical thinking and communication skills	2	S
CO5	Identify major theorists that contribute to the field of developmental psychology.	2	None

CO-PO Mapping for EM3304

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	3	2	3	1	3	0	1	3	2	0	2	3	3
CO2	2	1	0	3	2	2	3	3	2	3	1	1	0
CO3	0	2	1	3	2	0	2	3	2	1	0	3	0
CO4	2	1	0	1	0	0	1	2	0	1	2	0	1
CO5	1	0	2	0	0	3	1	0	2	0	3	3	2
Avg	1.6	1.2	1.2	1.6	1.4	1	1.6	2.2	1.6	1	1.6	2	1.2

SEMESTER 4 YEAR 2

EM3401	Title: Economics of Public Finance	LTPC 5 0 0 5
Version No.	1.0	
Course Prerequisites	None	
Objectives	The course intends to provide basic information to students on the scope of Public Economics, significance of government and its functions, governmental finance and its economic impacts, and budgeting with special reference to India.	
Unit No.	Unit Title	No. of hours(perUnit)
Unit I	Introduction to Public finance	12
Meaning and Scope of public finance: Classical, Keynesian and modern approach on Public economics, Public Finance and Private finance, Similarities and Dissimilarities, The principle of maximum social Advantage, The changing role of Government in modern economy.		
Unit II	Public Revenue and Public Expenditure	10
Public revenue and Public expenditure -Classification of public revenue-Sources of public revenue-Tax, Non-Tax sources-Canon of taxation, Direct tax, Indirect tax, GST. Public expenditure-Types of public expenditure-Canons of public expenditure-Theories Of Public Expenditure, expenditure-Reasons For Growth India's public expenditure		
Unit III	Public Debt and Budgeting	10
Public Debt and Financing -Meaning and objectives-Types-Sources of public debt-Internal and External Sources-Redemption of public debt- Public debt and Deficit financing- Economic effects of Deficit financing-India' s public debt. Financial Administration-Budget-Concept, significance and characteristics-Classification of budget—Revenue and capital accounts- Budgetary deficits and its implications—Techniques of budgeting-PPBS, ZBB.		
Unit IV	Fiscal Policy	12
Fiscal policy -Introduction to fiscal policies, Approaches of Classical and Keynesian economists on fiscal policy, Functions Instruments, Importance of fiscal policy.		
Unit V	Fiscal Federalism	10
Fiscal federalism Planning commission and Finance commission, Functions, Horizontal and Vertical imbalance, Measures to correct Fiscal imbalances, Allocation of resources between Central and State Governments, Sources of revenue of Central, State and local Governments in India .		
Textbooks	1. Hendrick, Jean and Gareth D Myles, Intermediate Public Economics, Prentice Hall of India 2. Singh, S .K, Public finance-Theory and Practice, S Chand, New Delhi.	
Reference Books	1. Hajela, Public Finance, 3rd, Anns Books, New Delhi 2. Agarwal, R.C, Public Finance Theory and Practice, Leksmi Narayan Agarwal, Agra, India.	
Mode of Evaluation		
Recommendation by Board of Studies on	03-03-2018	

Date of approval by the Academic Council	06-11-2018
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Course Outcome For EM3401

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Understand the sources of finance both public and private and the role of government in the economic and social aspects of its society.	2	None
CO2	To have conceptual clarity of public expenditure and revenue theories and to analyze the reasons for the growth in India's public Expenditure.	4	S
CO3	Understand the needs of public borrowing from all possible sources to meet necessary public investment/expenditures and to Deliver effectively the preparation of budget and how they are passed in the house.	3	S
CO4	Understand the different Fiscal policies and analyze the role played by them in the development of the nation.	2	S
CO5	Understand the financial relations between the country's federal government system and other units of government.	2	S

CO-PO Mapping for EM3401

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	0	2	3	0	0	2	0	3	0	1	3	1	2
CO2	1	1	3	3	3	1	0	3	1	2	1	2	0
CO3	3	2	3	0	3	2	0	1	3	3	3	2	2
CO4	1	2	2	3	3	1	3	1	0	3	0	0	1
CO5	1	0	3	2	0	0	2	3	1	3	0	0	1
Avg	1.2	1.4	2.8	1.6	1.8	1.2	1	2.2	1	2.4	1.4	1	1.2

EM3402	Title: International Economics	LTPC 4 0 0 4
Version No.	1.0	
Course Prerequisites	None	
Objectives	The purpose of this paper is to familiarize the students with the meaning, scope of international economics. Enhancing the level of students with reference to understanding of international economics.	
Expected Outcome	Students will know an advanced and integrated understanding of world economics and understand the impact of international factors on business.	
Unit No.	Unit Title	No. of hours(per Unit)
Unit I	Introduction	12
Introduction-Important issues in international trade, History and present state of world trade flows, Russian trade balance, History of the development of trade theory, Essentials: Ricardo and Comparative Advantage- The Ricardian model of trade, Empirical evidence and policy results, Factor Price Equalization and Trade- Heckscher- Ohlin model of trade, Stolper-Samuelson effects, Rybczynski effect, What is international economics about? An overview of world trade.		
Unit II	Theories of international trade	6
The Ricardian, specific factors, and Heckscher-Ohlin models; new trade theories; the international location of production; firms in the global economy-outsourcing and multinational enterprises. Stolper-Samuelson effects, Rybczynski effects, The "Specific Factors" model of trade, Redistribution aspect of trade policy, International experience.		
Unit III	International trade policy	10
Instruments Trade Policy; political economy of trade policy; controversies in trade policy. Welfare comparisons across countries, Welfare comparisons within countries, Imperfect Competition and trade, Externalities and protectionism, Empirical evaluation of importance.		
Unit IV	International monetary System	10
Fixed versus flexible exchange rates; international monetary systems; financial globalization financial crises, Economics of Tariffs, Economics of Quotas, Protection and Imperfect Competition, Welfare arguments, Income Distribution, Optimum Tariff, Technology and Externalities, Imperfect Competition and Protection.		
Unit V	International financial system	6
World Bank: organization structure, major financial policy of world bank, IMF: meaning, scope and importance of organization in international financing, Free trade agreements, customs unions, Trade creation vs trade diversion, Trade policy in developing countries: imports substitutions, export promotion, International negotiations: GATT, WTO, Doha round.		
Textbooks	1. Dominick Salvatore, International Economics: Trade and Finance, John Wiley International Student Edition.	

Reference Books	1. Charles Kolstad, Intermediate Environmental Economics, Oxford University Press. 2. Paul Krugman, Maurice Obstfeld, and Marc Melitz, International Economics, Oxford University Press.
Mode of Evaluation	Internal and External Examination
Recommendation by Board of Studies on	03-03-2018
Date of approval by the Academic Council	06-11-2018

Course Outcome For EM3402

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Summarizing important issues in international trade, history and present state of world trade flows, history of the development of trade theory.	2	None
CO2	Students will learn the international trade theories.	2	None
CO3	To understand the different instruments of trade policy.	2	S
CO4	Students will be able to learn about fixed and flexible exchange rate systems, tariff, and non tariff policy.	2	S
CO5	To learn about the different international organizations such as WTO and IMF.	1	S

CO-PO Mapping for EM3402

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	1	1	1	1	2	2	0	3	1	3	2	0	0
CO2	1	3	3	2	0	1	2	0	3	2	2	1	1
CO3	0	1	1	1	0	3	0	3	2	3	3	1	1
CO4	2	3	2	1	0	0	3	2	1	2	3	3	1
CO5	2	1	2	3	3	1	1	0	2	1	0	3	3
Avg	1.2	1.8	1.8	1.6	1	1.4	1.2	1.6	1.8	2.2	2	1.6	1.2

EM3403	Title: Industrial Economics	LTPC 4 0 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	After completing the course, Students are expected to understand such issues as: the levels at which capacity, output, and prices are set; the extent that products Are differentiated from each other; how much firms invest in research and development(R&D).	
Unit No.	UnitTitle	No. of hours(perUnit)
Unit I	Introduction	6
Nature Significance of industrial economics. Relationship Between Industrial economics and science, Engineering & Technology, Contribution of industrial economics to economic development.		
Unit II	Micro Economics	10
Basic concept of Micro Economics. Concept of demand, supply & price, the law pertaining to demand, supply & price indifference curve analysis, price effect, income effect & substitution effect.		
Unit III	Business & Industry Application	12
Business cycles. Business Fluctuations. Theory of business cycles. Business forecasting .Decision tree based on decision analysis case study based on microeconomics. Competitions prevailing in the market.		
Unit IV	Macro Economics	8
Introduction to macroeconomics relationship between macroeconomics & engineering & industry. National(N.I)Income & measurement of N.I. Inflation & deflation. N.I effect on economy. Unemployment & types of Unemployment. Relationship b/w inflation & unemployment measures to control inflation.		
UnitV	Money & Banking	8
Balance of payment disequilibrium in balance of payment. Functions of money. Value of money. Functions of bank: commercial banks & central banking in India. Monetary & fiscal policy: a brief introduction case study pertaining to macroeconomics. A brief description of the Indian Financial System.		
TextBooks	1. Bernadette Andreosso, David Jacobson, Industrial Economics and Organization, McGraw Hill. 2. Ken Heather, The Economics of Industries and Firms, Financial Times/Prentice Hall.	
ReferenceBooks	1. Boulding, Kenneth E, Economic Analysis. New York: Harper and Row.2 Volumes.vol.,Harper & Row, NY. 2. Bruce Allen, Neil Doherty, Keith Weigelt, Edwin Mansfield, Managerial Economics, W.W. Norton & Company.	
Mode ofEvaluation	Internal and External Examinations	
Recommendation Board of Studieson	03-03-2018	

Date of approval by the Academic Council	06-11-2018
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Course Outcome For EM3403

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Students will be able to learn about the nature & significance of industrial economics.	2	S
CO2	Summarizing the concept of Microeconomics such as demand, supply & price.	2	S
CO3	To understand about the Business cycles, Business Fluctuations and Theory of business cycles.	2	S
CO4	To learn the concept of Macroeconomics such as National Income, inflation, deflation, etc.	2	S
CO5	Summarizing the role of Banks and learning about money and its functions.	2	S

CO-PO Mapping for EM3403

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO1	2	1	0	2	0	0	1	2	2	3	1	2	1
CO2	0	2	1	1	1	2	0	2	1	3	2	1	1
CO3	1	0	3	2	0	3	3	3	2	1	2	2	0
CO4	1	2	3	1	1	2	1	1	1	0	3	1	3
CO5	2	2	0	0	3	1	3	3	2	0	0	0	2
Avg	1.2	1.4	1.4	1.2	1	1.6	1.6	2.2	1.6	1.4	1.6	1.2	1.4

EM3470	Title: Project- I	LTPC 3 0 0 3
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The course aims for students to conduct a minor research based on secondary data and write a research paper while applying there understanding about it.	
Mode of Evaluation	External Presentation Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3470

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	incorporates appropriate theoretical approaches, conceptual models, and a review of the existing literature.	3	S
CO2	Students will learn to structure a discussion in a coherent and convincing way by summarizing the key arguments and providing suitable and coherent findings.	3	S
CO3	Students will be able to draw valid conclusions, relating them to the research topic.	3	S
CO4	Students develop a design of their study with a discussion of the methodology to be used.	3	S
CO5	Students will be able write a dissertation	6	S

CO-PO Mapping for EM3470

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	0	0	1	0	0	1	3	3	2	3	2	0	1
CO 2	1	3	2	0	1	2	2	3	0	2	1	2	2
CO 3	2	1	3	2	3	2	0	0	3	2	2	1	2
CO 4	2	3	1	2	3	0	1	1	2	1	3	2	2
CO 5	3	0	2	1	0	3	0	3	3	0	2	1	2
Avg	1.6	1.4	1.8	1	1.4	1.6	1.2	2	2	1.6	2	1.2	1.8

SEMESTER 5 YEAR 3

EM3501	Title: Research Methodology	LTPC 4 0 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The course imparts skills to undertake data based research. The student enrolling in this course would develop competency in executing sample surveys and would have reasonable exposure to a variety of secondary data sources.	
UnitNo.	UnitTitle	No. of hours(perUnit)
UnitI	Types of Research	8
Introduction to Research, Types of Research, Data types and sources: Qualitative And Quantity Data, measurement and scales; secondary sources of data and institutions.		
UnitII	Research Design and Questionnaires	6
Research Design, Types of Research Design, Factors affecting Research Design, Exploratory Research Design, Descriptive Research Design and Experimental Research Design.		
UnitIII	Sampling and sampling Techniques	6
Sample type and size: Simple random sampling; cluster sampling; stratified sampling and its complications; Determining an appropriate size, Sample Questionnaires: Measurement And Scales; questionnaires.		
UnitIV	Hypothesis Testing	10
What is a Hypothesis, Basic Concepts Concerning Testing of Hypotheses, Procedure for Hypothesis Testing, Flow Diagram for Hypothesis Testing, Measuring the Power of a Hypothesis Test, Tests of Hypotheses, Important Parametric Tests, Hypothesis Testing of Means, Hypothesis Testing for Differences between Means, Hypothesis Testing for Comparing Two Related Samples, Hypothesis Testing of Proportions, Hypothesis Testing for Difference between Proportions, Hypothesis Testing for Comparing a Variance to Some Hypothesized Population Variance, Testing the Equality of Variances of Two Normal Populations, Hypothesis Testing of Correlation Coefficients, Limitations of the Tests of Hypothesis.		
UnitV	Data Analysis Using SPSS and Excel	10
Data cleaning, Data transformation, Multiple Imputation Techniques, T-test, F-test, Z-test, ANOVA (One Way), ANOVA (Two Way w/o Replication), ANOVA (Two way with Replication), Factor Analysis, Multiple Regression Analysis and Model Handling.		
TextBooks	1. Bethlehem, J. Applied Survey Methods: A Statistical Perspective. Wiley. 2. Cochran, W. Sampling Techniques. Wiley.	
ReferenceBooks	1. Flick, U. Introducing research methodology: A beginner's guide to doing a research project. Sage Publications. 2. Groves, R., Fowler, F., Couper, M., Lepkowski, J., Singer, E., Tourangeau, R. Survey Methodology. Wiley. 3. Kumar, R. Research Methodology: Step by step guide for beginners. Sage Publications.	
Mode of Evaluation	Internal and External Examinations	

Recommendation By Bored of Studies	03-03-2018
Date of approval by the Academic Council	06-11-2018

Course Outcome For EM3501

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To understand the types of Research, their measurement and their scales.	2	S
CO2	To understand the methodology and procedure of designing the procedure of Research.	2	S
CO3	To understand the different types of sampling techniques and its implication in the real world through questionnaires.	3	S
CO4	To understand and analyze the concept of Hypothesis testing.	2	S
CO5	To apply the statistical tools using SPSS and GRETAL	3	S

CO-PO Mapping for EM3501

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	3	3	3	2	0	3	0	0	3	2	3	2	2
CO 2	0	0	3	3	1	2	3	2	0	3	3	0	1
CO 3	3	3	2	1	3	3	1	2	0	2	0	3	0
CO 4	2	1	0	2	3	0	3	3	2	0	3	3	2
CO 5	1	2	3	3	0	3	2	3	3	1	3	1	3
Avg	1.8	1.8	2.2	2.2	1.4	2.2	1.8	2	1.6	1.6	2.4	1.8	1.6

EM3502	Title: Techniques in Decision Making	LTPC 4 0 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	To provide understanding of mathematical tools and their applications in real business life.	
Unit No.	Unit Title	No. of hours(perUnit)
Unit I	Time Value of Money	8
Unitary method meaning, Problems on Time and work, Problems on Speed, distance and time. Concept of Trigonometry And Probability.		
Unit II	Profit and Loss percentage	6
Concept of Profit & Loss, Problems on selling price and Cost price, Concept of percentages, Problems on Percentages & Average and Data interpretation using Percentage.		
Unit III	Mathematics of Financial Economics	8
Simple and Compound Interest, Annuity, Sinking Fund, Present Value of an Annuity/Amortization, Present Value Concept in Capital expenditure, Leasing and Bonds.		
Unit IV	Quantitative Aptitude	8
Logical Reasoning: Number Series, Coding and Decoding and Odd Man Out, Direction Tests, Seating Arrangements, Blood Relations and Syllogism.		
Unit V	Calculus	10
Differential Calculus, Chain rule, Integral Calculus, Beta Gamma functions, Multiple Variables		
Text Books	1. Quantitative Aptitude, RS Aggarwal, S. Chand Publications, 2. Fundamentals of Business Mathematics – by <u>M. K. Bhowal</u>	
Reference Books	1. PK Gupta, Business Mathematics and Business Statistics, Sultan Chand & sons. 2. Dr J.K. Thukral, Business Mathematics Statistics, maxima publications. 3. The Art of Problem Solving, Volume 1: The Basic Sandor Lehoczky, Richard Rusczyk.	
Mode of Evaluation	Internal and External Examinations	
Recommendation By Bored of Studies	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3502

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	to understand the problems related to time and work, speed, distance and trigonometry	2	S
CO2	to understand the concept of profit and loss, percentage and data interpretation	2	S
CO3	analyze the problems related to simple and compound interest.	2	S
CO4	analyze the problem related to logical reasoning.	2	S
CO5	to understand the concept of calculus.	2	S

CO-PO Mapping for EM3502

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	0	2	2	3	2	3	0	1	2	0	2	3	2
CO 2	2	3	0	2	3	3	3	1	1	2	0	3	1
CO 3	1	1	2	3	2	1	3	1	3	2	0	2	1
CO 4	3	0	0	1	0	0	2	3	1	1	2	1	3
CO 5	2	3	1	2	0	2	2	0	1	3	1	3	0
Avg	1.6	1.8	1	2.2	1.4	1.8	2	1.2	1.6	1.6	1	2.4	1.4

PROGRAM ELECTIVES

EM3516	Title: Financial Economics	LTPC 6 0 0 6
Version No.	1.0	
Objectives	To understand the “economic way of thinking” i.e. the rational and purposeful utility maximizing choices made by individual agents, understanding of the trade-offs and opportunity cost such choices involve.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Introduction to Financial Markets	8
Capital markets, consumption and investments with and without capital markets, market places and transaction costs and the Breakdown of separation; Fisher Separation Theorem; the agency problem; maximization of shareholder’s wealth.		
Unit II	Theory of Uncertainty	8
Axioms of choice under uncertainty; utility functions; expected utility theorem; certainty equivalence, measures of risk-absolute and relative risk aversions; stochastic dominance-first order, second order and third order; measures of investment risk-variance of return, semi-variance of return, shortfall probabilities.		
Unit III	Mean-Variance Portfolio	8
Theory Measuring portfolio return and risks, effect of diversification, minimum variance portfolio, perfectly correlated assets, minimum variance opportunity set, optimal portfolio choice; mean variance frontier of risky and risk-free asset, portfolio weights.		
Unit IV	Index Models	10
CAPM & APT Models of asset returns, multi index models, single index model, systematic and specific risk, equilibrium models-capital asset pricing model, capital market line, security market line, estimation of beta,; arbitrage pricing theory.		
Unit-V	Fixed Income Securities	8
Bond prices, spot prices, discount factors, and arbitrage, forward rates and yield-to-maturity, Price sensitivity, hedging.		
Text Books	Copeland, T. E. and J. F. Weston, Financial Theory and Corporate Policy, Addison Wesley, Brealey, R. and S. Myers, Principles of Corporate Finance, fifth edition, New York, McGraw Hill.	
Reference Books	Elton, E. J. and M. J. Gruber, Modern Portfolio Theory & Investment Analysis, (fourth edition) John Wiley & Sons. Houthakker, H. S. and P. J. Williamson, Economics of Financial Markets, Oxford University Press.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by	03-03-2018	

Board of Studies	
Date of approval by the Academic Council	06-11-2018

Course Outcome For EM3516

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Students will understand the capital market and the criteria to maximize the shareholders wealth.	2	S
CO2	Student will develop critical thinking to measure the uncertainty in the capital market.	3	S
CO3	Student will understand how to develop a portfolio.	3	S
CO4	Students will understand different Index models.	2	S
CO5	Student will develop the insight to estimate sources for fixed Income Security.	3	S

CO-PO Mapping for EM3516

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	2	2	1	3	1	3	3	0	3	0	0	2	2
CO 2	2	3	3	2	2	2	3	3	0	1	1	1	2
CO 3	3	3	1	2	2	3	3	1	0	3	2	2	3
CO 4	2	1	3	3	1	2	2	1	3	1	0	1	3
CO 5	2	0	1	1	2	2	2	3	0	0	2	0	0
Avg	2.2	1.8	1.8	2.2	1.6	2.4	2.6	1.6	1.2	1	1	1.2	2

EM3517	Title:: Game Theory	LTPC 6 0 0 6
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	After completing the course, Students are expected to have good understanding of the game theory in Economy.	
UnitNo.	UnitTitle	No. of hours (per Unit)
UnitI	Normal Form Games	8
The Payoff Matrix of a Game, The normal form; dominant and dominated strategies; dominance solvability; mixed strategies; Nash equilibrium; Mixed Strategies, symmetric single population games; applications		
UnitII	Extensive Form Games with Perfect Information	8
The gametree; strategies; sub-game perfection; backward induction in finite games; commitment; bargaining; other applications		
UnitIII	Simultaneous Move Games with Incomplete Information	8
Strategies; Bayesian Nash equilibrium; applications		
UnitIV	Extensive Form Games with Imperfect Information	8
Strategies; beliefs and sequential equilibrium; applications		
UnitV	Information Economics	8
Adverse Selection; moral hazard; signaling games,		
TextBooks	Osborne, M. An introduction to game theory. Oxford University Press.	
ReferenceBooks	<ol style="list-style-type: none"> 1. Varian, Hal R.: Intermediate Microeconomics 2. Mankiw, Gregory N.: Principles of Economics 3. Pindyck, Robert S. & Rubinfeld, Daniel L.: Microeconomics [PHI] 4. Browning, Edgar K. zupan.: Microeconomics Theory and Applications 	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3517

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To understand the basis of game theory.	2	S
CO2	To understand the apply the concept of Extensive Form Games with perfect information.	2	S
CO3	To understand and apply the concept of Simultaneous form games with imperfect information.	2	S
CO4	To understand and apply the concept of extensive form games with imperfect information.	2	S
CO5	To understand the concept of information economics.	2	S

CO-PO Mapping for EM3517

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO 2	PO 3	PO4	PO5	PO 6	PO7	PO8	PO9	PO1 0	PSO 1	PSO 2	PSO 3
CO 1	3	3	0	0	2	0	3	2	0	3	2	1	0
CO 2	0	3	3	2	3	3	3	1	0	0	2	1	2
CO 3	0	3	1	3	3	3	3	1	1	1	3	1	3
CO 4	3	1	2	0	3	2	2	1	3	2	1	3	0
CO 5	3	0	1	0	2	3	1	2	2	3	0	0	3
Avg	1.8	2	1.4	1	2.6	2.2	2.4	1.4	1.2	1.8	1.6	1.2	1.6

EM3518	Title: Basic Econometrics	LTPC 6006
Version No.	1.0	
Course Prerequisites	None	
Objectives	The purpose of this paper is to familiarize the students with the scope , nature & different techniques , principles & methods of Econometrics. Enhancing the level of students with reference to understanding the different statistical tools and techniques for better understanding of economic theories.	
UnitNo.	UnitTitle	No.of hours(perUnit)
Unit I	Nature and Scope of Econometrics	12
An Overview, use econometrics in economic theory, Different methods, Statistical methods, different parameters of statistical models, usefulness of data		
Unit II	Statistical Inferences	10
Normal distribution; chi-sq, t-and F-distributions, Estimation of parameters, Testing of hypotheses, Defining statistical hypotheses, Distribution of test statistics, Testing hypotheses related to population parameters		
Unit III	Simple Linear Regression Model: Two Variable Cases	12
Estimation Of Model By Method of ordinary least squares, Properties Of Estimators, Goodness of fit, Testing of Hypothesis		
Unit IV	Multiple Linear Regression Model	10
Estimation of parameters, Properties of OLS estimators, Goodness of fit - R^2 and Adjusted R^2 , Partial regression coefficients		
Unit V	Violations of Classical Assumptions; Consequences, Detection Remedies	10
Multicollinearity, Heteroscedasticity, Serial Correlation		
Text Books	1. Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House. 2. Maddala, G. Sand Kajal Lahiri, Introduction to Econometrics, Wiley Publication.	
Reference Books	1. Christopher Dougherty, Introduction to Econometrics, OUP, India Edition. 2. Damodar Gujarati, Econometrics by Example, Palgrave Macmillan.	
Mode of Evaluation	Internal and External Examination	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3518

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To understand the nature and scope of econometrics.	2	S
CO2	To understand inferential statistics.	2	S
CO3	To understand the simple linear regression model.	2	S
CO4	To understand the multiple linear regression model.	2	S
CO5	To understand the working of econometrics in case of violation of assumptions.	2	S

CO-PO Mapping for EM3518

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO 1	PO2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO 2	PSO 3
CO 1	2	3	0	0	2	2	2	1	0	2	0	0	0
CO 2	0	3	1	1	1	3	1	3	3	3	1	1	3
CO 3	1	1	2	3	1	0	3	0	2	2	3	3	3
CO 4	2	0	2	0	0	3	3	1	3	0	3	2	3
CO 5	0	1	0	3	3	0	3	1	0	0	0	0	3
Avg	1	1.6	1	1.4	1.4	1.6	2.4	1.2	1.6	1.4	1.4	1.2	2.4

EM3519	Title: Law & Economics	L T P C 6 0 0 6
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	The course aims to impart the knowledge of role of law in economics development, economic requirement putting pressure on legislative to change the law.	
UnitNo.	UnitTitle	No. of hours(perUnit)
UnitI	An Overview of Law and Economics	8
Positive and Normative approaches EAL and L&E, Cognition and cost-benefit analysis, Empirically informed regulation. Efficacy, effectiveness, efficiency of the law.		
UnitII	Basic Notions of Law and Economics	8
The varieties of efficiency, productive efficiency, Pareto superiority, Pareto optimality, Kaldor-Hicks criterion, wealth maximization. Efficient resource allocation, Coase Theorem, transaction cost and property rights.		
UnitIII	Contract and Tort Law	8
Contract law; benefits of exchange, contract validity, remedies for breach of contract, disclosure duties, productive and distributive information. Tort law: external v. internal liability standards, negligence and strict liability, the Hand Formula, causation, the scope of liability, Punitive damages.		
UnitIV	Economic Issues in Evidence	8
Evidence law; relevancy and reliability, exclusionary rules and economic rationales, an economic reading of the standards of proof, cost associated with errors.		
UnitV	Constitutional and HRLaw	8
Constitutional Law: proportionality analysis, suitability, necessity, balancing, Balancing sCBA. Human Rights Law: violations of human right and economic remedies.		
TextBooks	1. Sunstein. C. Cognition & Cost-benefits Analysis. The Journal of Legal Studies, 29:1059-1103. 2. Miceli. T. The Economic Approach to Law. Stanford UP. pp. 109-160. 3. Kaplow, L. Burden of Proof, The Yale Law Journal, 121:738-859	
ReferenceBooks	1. Coleman J. L. Efficiency, Unity and Wealth Maximization, Hofstra Law Review, 8: 509-551. 2. Landes, W. & Posner, R. The Positive Economic Theory of Tort Law. Georgia Law Review, 15:851-924. 3. Posner. R. An Economic Approach the Law of Evidence, Stanford Law Review, 51:1477-1546.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies	03-03-2018	

Date of approval by the Academic Council	06-11-2018
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Course Outcome For EM3519

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To understand the basics and need for law and Economics.	2	S
CO2	To understand the basics of Law and Economics.	2	S
CO3	To develop critical thinking about contract and tort law.	2	S
CO4	To analyze the need of law by viewing economics issues.	2	S
CO5	To understand and analyze the constitution and HR law.	3	S

CO-PO Mapping for EM3519

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO 2	PO 3	PO4	PO5	PO 6	PO7	PO8	PO9	PO1 0	PSO 1	PSO 2	PSO 3
CO 1	3	2	0	3	2	1	2	3	1	1	2	3	2
CO 2	3	0	0	2	1	3	0	2	1	3	3	3	3
CO 3	3	2	1	1	2	0	1	1	2	2	2	0	1
CO 4	3	0	2	0	0	1	2	1	0	3	1	1	0
CO 5	2	1	2	3	3	2	1	0	2	0	0	0	1
Avg	2.8	1	1	1.8	1.6	1.4	1.2	1.4	1.2	1.8	1.6	1.4	1.4

SEMESTER6
YEAR 3

EM3601	Title: Money and Financial Market	LTPC 4 0 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure, and role of financial markets and institutions. Financial And banking sectorre forms And monetary policy with special reference to India a reals covered.	
Unit No.	Unit Title	No. of hours(perUnit)
UnitI	Money	8
Meaning and functions Money ,importance of money, stages of evolution money, classification of money.		
UnitII	RBI and Money Supply	8
Meaning of money supply, Alternative measures of money supply, components of money supply, High powered money- meaning and uses. Role of RBi money creation.		
UnitIII	Finance	8
Meaning of Finance, role of finance, kinds of finance, financial market and financial intermediaries, and instruments.		
UnitIV	Indian Banking System	8
Commercial bank–importance and functions and its structure, credit creation, RRB and functions.		
UnitV	Interest Rates	8
Variou ratesin India, Administered ratesand Marketdetermined rates, Source Difference Rates Of Interest.		
TextBooks	1. Baye,M.,Jansen,D.Money,BankingandFinancialMarkets.AITBS. 2. Bhole,L.,Mahukud,J.FinancialInstitutionsandMarkets. TataMcGraw-Hill. 3. Fabozzi,F.,Modigliani,F., Jones,F.,Ferri,M.FoundationsofFinancialMarketsandInstitutions,PearsonEducation. 4. Jadhav,N.MonetaryPolicy,FinancialStabilityandCentralBankinginIndia.Macmillan. 5. Khan,M.IndianFinancialSystem,TataMcGraw-Hill.	
ReferenceBooks	1. Mishkin,F.,Eakins,S.FinancialMarketsandInstitutions, Pearson. 2. Mohan,R.GrowthwithFinancialStability:CentralBankingina Emerging Market.Oxford University Press. 3. Various Latest Issues of RBI Bulletins, Annual Reports, Reports on Currency and Finance, andReportsofthe WorkingGroup,IMF StaffPapers.	
ModeofEvaluation	InternalandExternalExaminations	
Recommendation By Bored of Studies	03-03-2018	

Date of approval by the Academic Council	06-11-2018
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Course Outcome For EM3601

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Understand the basic concept about the money	2	S
CO2	Understand the basic concept about the money supply and money creation.	2	S
CO3	Understand the basic concept about financial market and intermediaries	2	S
CO4	Understand the structure of the Indian Banking system.	2	S
CO5	Understand about Interest rate	2	S

CO-PO Mapping for EM3601

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	2	1	2	3	0	0	0	0	3	0	2	0	2
CO 2	2	0	0	2	3	1	2	2	2	1	0	1	3
CO 3	1	3	0	3	1	3	1	2	3	0	1	3	1
CO 4	0	2	3	3	0	2	0	0	3	3	2	3	0
CO 5	3	0	3	0	2	2	2	3	0	3	2	0	0
Avg	1.6	1.2	1.6	2.2	1.2	1.6	1	1.4	2.2	1.4	1.4	1.4	1.2

EM3602	Title: Economics Marketing	LTPC 4 0 0 4
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	This course imparts knowledge of economics of marketing for maximizing enterprise profit ability through maximizing consumer satisfaction; how to reconcile the objectives of consumers with those of the organization.	
UnitNo.	UnitTitle	No. of hours(p erUnit)
UnitI	Introduction	8
Introduction: Concept, nature, scope and importance of marketing; Marketing concept and its evolution; Marketing mix; Strategic marketing planning – an overview. Market segmentation and positioning; Consumer behavior; consumer versus organizational buyers; Consumer decision making process.		
UnitII	Decision Making	8
Product Decisions: Concept of a product; Classification of products; Major product decisions; Product line and product mix; Branding; Packaging and labeling; Product life cycle, New product development and consumer adoption process. Pricing Decisions: Factors affecting price determination; Pricing policies and strategies; Discounts and rebates.		
UnitIII	Distribution	8
Distribution Channels and Physical Distribution Decisions: Nature, functions, and types of distribution channels; Distribution channel intermediaries; Channel management decisions; Retailing and wholesaling.		
UnitIV	Promotion Decision	8
Promotion Decisions: Communication Process; Promotion mix – advertising, personal selling, sales promotion, publicity and public relations; Determining advertising budget; Copy Designing And Testing; Media Selection; Advertising Effectiveness; Sales Promotion – tools and techniques.		
UnitV	Issues and Developments	8
Issues and Developments in Marketing: Social, ethical and legal aspects of marketing; Marketing of services; International marketing; Green marketing; Cyber marketing; Relationship marketing and other developments of marketing.		
TextBooks	1. Kotlar, Philip, Marketing Management, Prentice Hall, New Delhi. 2. Stanton, Etzel, Walker, Fundamentals of Marketing, Tata-McGraw Hill, New Delhi.	
ReferenceBooks	1. Saxena, Rajan, Marketing Management, Tata-Mc Graw Hill, New Delhi. 2. McCarthy, E.J., Basic Marketing: A managerial approach, Irwin, New York.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies	03-03-2018	

Date of approval by the Academic Council	06-11-2018
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Course Outcome For EM3602

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Understand the concept of marketing and Consumer behavior.	2	S
CO2	Understand the process of Product and Pricing decision making	2	S
CO3	Understand the distribution channel and process.	2	S
CO4	Understand the process of the Promotion decision.	2	S
CO5	Understand the legal issues of marketing.	2	S

CO-PO Mapping for EM3602

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	2	2	2	3	3	1	2	0	2	1	3	2	0
CO 2	1	3	2	3	1	2	0	3	1	2	1	0	3
CO 3	0	0	0	0	0	0	1	3	2	3	2	2	0
CO 4	3	0	2	0	1	3	1	2	3	1	3	3	2
CO 5	0	2	3	3	3	3	1	2	1	3	2	3	3
Avg	1.2	1.4	1.8	1.8	1.6	1.8	1	2	1.8	2	2.2	2	1.6

PROGRAM ELECTIVES

EM3616	Title: Health Economics	L T P C 6 0 0 6
Version No.	1.0	
Course Prerequisites	Nil	
Objectives	To impart understanding of how one can explain and predict peoples' Health related behavior and use this understanding to predict the consequences of different social actions.	
Unit No.	Unit Title	No. of hours(per Unit)
Unit I	Role of Health and Education in Human Development	12
Importance in poverty alleviation; health and education outcomes and the relationship with macroeconomic performance.		
Unit II	Microeconomic Foundations of Health Economics	12
Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality.		
Unit III	Health Sector in India: An Overview	10
Health outcomes; health systems; health financing, Costing, cost effectiveness and cost-benefit analysis; burden of disease.		
Unit IV	Education: Investment in Human Capital	12
Rate of return to education: private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India.		
Unit V	Education Sector in India: An Overview	10
Literacy rates, school participation, school quality measures.		
Textbooks	1. William, Jack, Principles of Health Economics for Developing Countries, World 24 Bank Institute Development Studies. 2. World Development Report, Investing in Health, The World Bank.	
Reference Books	1. Ronald G., Ehrenberg and Robert S., Smith, Modern Labor Economics: Theory and Public Policy, Addison Wesley.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3616

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Understand the role of Health and education in human development and analyze their relationship with macroeconomic performance.	2	S
CO2	Analyze the demand for health services and emergence of the health insurance market.	4	S
CO3	Analyze the role of the Health sector in the development of India through cost benefit analyses.	4	S
CO4	Understand the role of education in human capital development.	2	S
CO5	Understand the role of education in the development of India.	2	S

CO-PO Mapping for EM3616

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
CO 1	2	0	3	2	1	0	1	2	2	0	2	1	0
CO 2	1	1	0	3	2	2	1	0	3	1	1	3	3
CO 3	0	3	1	2	3	1	2	2	2	3	0	0	2
CO 4	3	2	2	0	2	2	2	2	0	3	2	0	0
CO 5	2	0	1	1	1	3	1	1	0	0	3	1	2
Avg	1.6	1.2	1.4	1.6	1.8	1.6	1.4	1.4	1.4	1.4	1.6	1	1.4

EM3617	Title: Political Economics	L T P C 6 0 0 6
Version No.	1.0	
Course Pre requisites	Nil	
Objectives	The course aims to impart the knowledge of political aspects of Economics. Students will be able to understand the relation between politics and economic and their mutual interaction.	
UnitNo.	UnitTitle	No. of hours(per Unit)
UnitI	Introduction to Political Aspect of Economy	10
	Role of political ideology in framing economic policy of the country, economic policy outcome impacting election results, some great economic crisis that resulted in change in economic policy of the nation, economic inequality transforming to social unrest and consequently germination of political revolution.	
UnitII	From Independence of India 1991	5
	Difference of economic idea of Pandit Nehru and Sardar Patel, Starting with Mixed economy, role of green revolution. Starting with Mixed economy then turning to socialist economy, role of green revolution, role of nationalization of banks, nationalization of coal, applying emergency, role of first non-congress government, congress post emergency-loss, liberalization act from 1984-1989, BOP crisis of 1991.	
UnitIII	From 1991 to till date	5
	LPG acceptance as economic policy, role of Dr. Manmohan Singh and P. V. Narasimha Rao, role of NDA-I, era of Dr. Manmohan Singh as Prime Minister, NDA-II regime, evaluating performance of LPG tenure from 1991 to till date, the challenges in path of economic growth, political helplessness of political leader on economic issues.	
UnitIV	International Economic Study	15
	Basic Data. Reviews the basic data of population, output and development used to make international comparisons between countries. Differences in wealth and poverty between nations, Inequality and Fragmentation. Examines how society can be fragmented along lines of religion, language, ethnicity and income. Globalization- meaning, benefits and role. International organizations- IMF, WTO, UN, UNSC, WB, ADB, ASEAN, OPEC, International Labor Organization, Non-Governmental Actors.	
UnitV	International Political Economy	15
	Poles of economic strength in world US, Russia & China, WTO agreement. Bone of contention among developed economy, developing economy and underdeveloped economy over agriculture product, pollution and tariff charges, trade war between US and China, Spain crisis, 2008 global crisis and its impact on economic powerhouses of US and Europe.	
Text Books	Principles of Political Economy, Daniel E. Saros, Valparaiso University	
Reference Books	Principles of Political Economy by John Stuart Mill.	
Mode of Evaluation	Internal and External Examinations	

Recommendation by Board of Studies	03-03-2018
Date of approval by the Academic Council	06-11-2018

Course Outcome For EM3617

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To understand the role of political ideology in framing economic policy of the country.	2	S
CO2	To understand how politics influence the economy from Independence of India till 1991.	2	S
CO3	To understand how politics influence the economy from 1991 to till date.	2	S
CO4	To make international comparisons between different countries.	2	S
CO5	To understand the poles of economic strength in the world.	2	S

CO-PO Mapping for EM3617

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO7	PO 8	PO 9	PO1 0	PSO1	PSO 2	PSO 3
CO 1	3	0	0	3	1	3	0	3	0	3	3	2	1
CO 2	1	2	2	2	1	0	3	3	3	2	0	1	1
CO 3	2	2	1	3	2	2	3	2	1	3	1	2	3
CO 4	0	2	0	3	2	3	2	0	2	0	1	1	2
CO 5	1	1	2	0	3	2	3	3	3	3	3	0	0
Avg	1.4	1.4	1	2.2	1.8	2	2.2	2.2	1.8	2.2	1.6	1.2	1.4

EM3618	Title: Applied Econometrics	LTPC 6006
VersionNo.	1.0	
CoursePrerequisites	None	
Objectives	The purpose of this course is to familiarize the students with the scope , nature & different techniques , principles & methods of Econometrics. Enhancing the level of students with reference to understanding of the different statistical Tools and techniques for better understanding of economic theories.	
UnitNo.	UnitTitle	No. of hours(per Unit)
UnitI	Stages in Empirical Research	6
An Over view, use of econometrics in economic theory, methodology, and basic of econometrics		
UnitII	Linear Regression Model; Estimation, Specification, Testing	10
The Matrix Approach to Linear Regression Model: The- variable regression model, Assumptions of the Classical Linear Regression Model, OLS estimation, Variance-Covariance Matrix, Coefficient of Determination R^2 . Review of Functional forms and Qualitative explanatory variable regression models, Regression Diagnostics		
UnitIII	Advance Topics in Regression Analysis	12
Dynamic Econometric Models; Distributed Lag Models: Nature of lagged Phenomena, Estimation using Koyck transformation (The Adaptive Expectations and Partial Adjustment Models), Instrumental Variable Estimation; Omitted variables in a simple regression model		
UnitIV	Panel Data Model & Estimation Techniques	12
The Pooled OLS Regression Model, the Fixed Effect Least Squares Dummy Variable Model, the Fixed Effect within Group Estimator, the Random Effects Model		
UnitV	Introduction to Econometric Software; GRETL/Eviews	10
Generation of data sets and data transformation; data analysis (Graphs and Plots, Summary Statistics, Correlation Matrix etc.) ,Running an OLS regression; Testing for Linear Restrictions and Parameter Stability. Regression Diagnostics: Collinearity, Autocorrelation, Heteroscedasticity, Normality of residuals		
TextBooks	1. D.N. Gujarati, D.C. Porter and Sangeetha Gunasekaran, Basic Econometrics, McGraw Hill. 2. Damodar Gujarati, Econometrics by Example, Palgrave Macmillan.	
ReferenceBooks	1. Christopher Dougherty, Introduction to Econometrics, OUP. 2. Damodar Gujarati, Econometrics by Example, Palgrave Macmillan.	
Mode of Evaluation	Internal and External Examination	
Recommendation by Board of Studies	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3618

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	Understand the use of econometrics in economic theory.	2	S
CO2	Understand, apply and estimate the linear regression model in the economic theory	3	S
CO3	Apply and analyze the economic theories using the dynamic econometric model.	4	S
CO4	Understand, apply and evaluate the panel data model and estimation techniques.	5	S
CO5	Apply econometrics theoretical knowledge in practical use by using the econometric software: GRETL/ EViews	3	S

CO-PO Mapping for EM3618

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO 1	PO2	PO 3	PO4	PO 5	PO 6	PO7	PO 8	PO9	PO1 0	PSO 1	PSO 2	PSO 3
CO 1	1	3	2	3	3	3	3	1	3	3	2	0	3
CO 2	1	3	3	3	2	1	2	1	3	2	3	2	2
CO 3	3	2	2	2	1	0	3	3	1	2	3	3	2
CO 4	3	1	0	3	2	1	2	2	0	0	0	1	3
CO 5	2	0	0	3	2	2	1	3	2	0	1	2	1
Avg	2	1.8	1.4	2.8	2	1.4	2.2	2	1.8	1.4	1.8	1.6	2.2

EM3619	Title: Economics Sociology	LTPC 6 0 0 6
Version No.	1.0	
Course Pre requisites	Nil	
Objectives	This course introduces the students to the conceptual underpinnings of economic sociology and its significance, the processes of social production in different social formations and the relevance of the sociological Approaches in understanding these processes.	
Unit No.	Unit Title	No. of hours (per Unit)
Unit I	Perspectives in Economic Sociology	10
Concepts of value, labor, property, money and rationality, Sociological approaches to the study of Economy, Formalism and Sub stantivism,		
Unit II	Forms of Exchange	10
FormsofExchange:-ReciprocityandGift,Distribution,ExchangeandMoney		
Unit III	Systems of Production, Circulation and Consumption	8
Hunting and Gathering ,Domestic Mode of Production ,Peasant , Capitalism : State, market and society Socialism:-State, production and distribution		
Unit IV	Contemporary Issues in Economic Sociology	10
Globalization: Meaning, Characteristics and its Impact on Society Development: MeaningandIndicatorsofDevelopment;GlobalTrendsofDevelopment.		
Unit V	New Economic Sociology	8
Post Industrial Society:-Information, Communication, Technology and society, Social Security and Alienation		
Textbooks	1. Bottomore, T. Theories of Modern Capitalism. London: Routledge. 2. Smelser, N.J. The Sociology of Economic Life. Whitefish: Literary Licensing. 3. Mohanty, P. K: A Textbook of Economic Sociology, Wisdom Press.	
Reference Books	1. Trigilia, C. Economic sociology: State, market, and society in modern capitalism. Oxford, UK: Basil Blackwell. 2. Smelser, N.J. and Richard Swedberg. The Handbook of Economic Sociology Princeton University Press.	
Mode of Evaluation	Internal and External Examinations	
Recommendation by Board of Studies on	03-03-2018	
Date of approval by the Academic Council	06-11-2018	

Course Outcome For EM3619

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use , for more than One)
CO1	To understand the perspective in Economic Sociology.	2	S
CO2	To understand the forms of exchange.	2	S
CO3	To understand the system of production, circulation and consumption.	2	S
CO4	To understand the contemporary issues in Economic sociology.	2	S
CO5	To understand the new economic sociology.	2	S

CO-PO Mapping for EM3619

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Notrelated-0)										Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO7	PO 8	PO9	PO1 0	PSO1	PSO 2	PSO 3
CO 1	1	0	3	1	1	0	1	1	1	2	3	2	2
CO 2	2	3	3	1	0	3	2	3	2	3	2	3	3
CO 3	1	2	2	2	2	0	1	1	0	0	1	2	1
CO 4	2	0	0	1	2	1	1	2	2	2	2	1	1
CO 5	1	2	3	2	2	3	3	1	3	0	3	2	3
Avg	1.4	1.4	2.2	1.4	1.4	1.4	1.6	1.6	1.6	1.4	2.2	2	2