

1.2.1 University Regulation for Choice Based Credit System

KRUPANIDHI GROUP OF INSTITUTIONS

12/1, Chikka Bellandur, Carmelaram Post Varthur Hobli, Off Sarjapur Rd, Bengaluru, Karnataka 560035





Jnana Bharathi, Bangalore-560056



REGULATIONS GOVERNING THE CHOICE BASED CREDIT SYSTEM FOR THE TWO YEARS (FOUR SEMESTERS) MASTERS DEGREE PROGRAMMES IN THE FACULTIES OF ARTS, SCIENCE AND COMMERCE

(Framed under Section 44(1) (c) of the KSU Act 2000)

June 2014

Principal/Director

Krupanidhi Group of Institutions

12/1 Chikkabellandur Village,

12/1 Chikkabellandur Varthur Hobli,

Carmelaram Road Post Varthur Hobli,

Bangalore - 560 035

BANGALORE UNIVERSITY

REGULATIONS GOVERNING THE CHOICE BASED CREDIT SYSTEM FOR THE TWO YEARS (FOUR SEMESTERS) MASTERS DEGREE PROGRAMMES IN THE FACULTIES OF ARTS, SCIENCE AND COMMERCE

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Preamble:

New challenges in higher education have led to a paradigm shift in reconceptualising this sector in terms of what constitutes Higher Education and what the goals of this education ought to be. Traditional educational systems rely on information based knowledge. However the shortcomings in collapsing the task of knowledge acquisition to largely an exercise in imparting information are increasingly felt in society with profound consequences. The need of the hour is to move towards a more holistic approach that integrates providing of skills and specialized training with the values necessary to make a student into a better human being and a useful member of society. Thus the role of Universities and colleges in the 21st Century extends far beyond traditional knowledge creation and dissemination to encompass new expectations for innovations that will have broader social and economic benefits. Bangalore University wishes to initiate qualitative and substantial changes in its undergraduate and post-graduate programmes, to cater to the needs of students with diverse talents, aspirations and professional requirements.

The University Grants Commission, New Delhi in its guidelines has directed all the Universities in the country to implement the Choice Based Credit Semester Scheme in all the under-graduate and post-graduate programmes. The State Higher Education Council has also communicated general guidelines in this regard. Hence the Bangalore University thought it fit to introduce Choice Based Credit System in all its Undergraduate and Post-graduate Programmes, with multiple exit options with multiple degrees in the Faculties of Arts. Science and Commerce effective from the academic year 2014-15. For multifaceted development of students, curriculum emphasizes on wide variety of courses to enhance their knowledge in several core courses.

Thus the present post-graduate programmes in subjects have been restructured to implement the Choice Based Credit Semester Scheme in all its Post-graduate Programmes and to introduce an exit option with the honours degree in the subjects at the end of the first year of the programmes, provided the candidates have studied that subject in all the three years of the undergraduate programme. The successful completion of the second-year of the post-graduate, programmes would lead to Masters Degrees in all the subjects. The Restructured Choice Based Credit Semester Schemes make the product of a University at par with the global practices in terms of academic standards and evaluation strategies, retaining the structures of the present undergraduate and post-graduate programmes. In the emerging scenario of Internationalization of Indian Higher Education, it is imperative that the Universities in India should follow this system so that the mobility of their products both within and across the geographical jurisdiction becomes possible.

The Salient Features of the Choice Based Credit System (Semester Scheme):

Each course shall carry certain number of credits. Credits normally represent the weightage of a course and are a function of teaching, learning and evaluation strategies such as number of contact hours, the course content, teaching methodology, learning expectations, etc. In the proposed progammes, the credits shall be based on the number of instructional hours per week, generally 1 credit per hour of instruction in theory and 1 credit for 2 hours of

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MASTER OF COMPUTER APPLICATION (MCA)

Graduates who have secured a minimum of 50% marks in Mathematics / Statistics/ Computer Science / Computer Programming/ Computer Applications / Business Mathematics / Business Statistics as one of the Optionals or Electives at the degree level. Provided further that in respect of candidates who have studied one of the subjects specified in the First proviso in the Pre - University course with 50% of marks in that subject.

HOME SCIENCE RELATED COURSES

M.Sc. in CLINICAL NUTRITION AND DIETETICS

Graduates who have secured a minimum of 50% marks in the aggregate of all subjects are eligible in the following order of priority a) Clinical Nutrition and Dietetics b) Nutrition and Dietetics, and c) Medical graduates – MBBS.

M.Sc. in EARLY CHILDHOOD EDUCATION AND ADMINISTRATION

Graduates from any discipline who have secured at least 50% marks in the aggregate of all subjects (including languages) are eligible. Three seats are earmarked for professionals sponsored by recognized institutions in the field of Early Child Care/Education and International students. Students from non-Home Science, Non-education and non-psycholog background are required to complete a foundation course in the first semester along with the regular course of the first semester.

M.Sc. in EXTENSION EDUCATION AND COMMUNICATION

Graduates who have secured a minimum of 50% marks in the aggregate and optional subjects are eligible. First preference will be given to students who have studied Home Science at the Undergraduate level. Non–Home Science background students are required to complete a Foundation course in the First Semester along with the regular courses of the First Semester.

M.Sc. in FOOD AND NUTRITION

Graduates who have secured a minimum of 50% marks in the aggregate of all subjects are eligible in the following order of priority: Graduates in a) food and Nutrition, b) clinical nutrition and Dietetics, c) Food Science and Nutrition d) Science and Technology, d) Science with Home Science as one of the optional subjects e) Biotechnology, Microbiology and Biochemistry, g) Ayurvedic Medicine, Homeopathy and Naturopathy, and h) Nursing.

M. Sc. in HUMAN DEVELOPMENT

Graduates who have secured a minimum of 50% marks in the aggregate and optional subjects are eligible. First preference will be given to students who have studied Home Science at the graduate level. Students from Non – Home Science background are required to complete a Foundation course in the First Semester along with the regular courses of the First Semester.

M.Sc. in RESOURCE MANAGEMENT

Graduates who have secured a minimum of 50% marks in the aggregate and optional subjects are eligible. First preference will be given to students who have studied Home Science at the Undergraduate level. Non-Home Science background students are required to complete a Foundation course in the First Semester along with the regular courses of the First Semester.

M.Sc. in TEXTILES AND CLOTHING

B.Sc. graduates with integrated / Composite Home Science / B.Sc. with Home Science as one optional/ Home Science & Chemistry / Wet Processing / Fashion & Apparel Delign securing 50% marks in the aggregate and optional are eligible.

SPEECH AND HEARING COURSES

M.Sc. in AUDIOLOGY and SPEECH LANGUAGE PATHOLOGY

Bachelor's Degree holders in Speech Language and Hearing Sciences with a minimum of 50% marks in the aggregate are eligible. In-service Category is retained in the case of (Government Hospital / Institutions / Autonomous Institutions.

M.Sc. in AUDIOLOGY / SPEECH LANGUAGE PATHOLOGY

B.Sc./ B.S.L.P.A/B.A.S.L.P. Degree from any University recognized with minimum pass percentage required as per University norms.

MASTER OF LIBRARY AND INFORMATION SCIENCE (M.L.I.Sc.)

Candidates who have passed any degree examination in Second Class with at least 50% marks in the aggregate in optional subjects are eligible for admission.

4.3 FACULTY OF COMMERCE:

MASTERS DEGREES IN COMMERCE AND MANAGEMENT SUBJECTS

MASTER OF COMMERCE, M.Com.

Candidates who have passed the three year B.Com./ B.B.M. degree examination of Bangalore University or any other University considered as equivalent thereto, provided they have obtained not less than 50% (45% for SC/ST/Category-I candidates) marks in the aggregate in

MASTER OF TOURISM ADMINISTRATION, M.T.A.

Candidates who have passed Bachelor's or Master's Degree Examination of Bangalore University or any other University in Commerce, Management, Arts, Social Sciences. Science. Engineering / Technology or equivalent and have secured at least 50% (45% for SC/ST and category – I candidates) marks in the aggregate are eligible for admission.

MASTER OF FINANCE AND ACCOUNTING, M.F.A.

Candidates having Bachelor's or Master's Degree in Commerce /Accounting/ Management/ Economics of Bangalore University or any other University and have secured at least 50% marks in the aggregate of all papers studied in the qualifying examinations are eligible.

MASTER OF INTERNATIONAL BUSINESS, M.I.B.

Candidates who have passed Bachelor's or Master Degree examination of Bangalore University or any other University and have secured at least 50% of marks in the aggregate of all the papers studied in the qualifying examination are eligible for admission.

Lateral Entry to 4th year MBS Five year Integrated Course

A candidate who has passed the B.Com. / B.B.M. Degree Examination of Bangalore University or any other University and has secured not less than 50% marks in aggregate in Commerce subjects in all the examinations of the B.Com. / BBM course are eligible.

MASTER OF BUSINESS ADMINISTRATION, MBA (Day)

Candidate who has passed Bachelor Degree examination with not less than 50% of marks in aggregate in all the three years of Degree examination.



1.2.1 CHOICE BASED CREDIT SYSTEM SYLLABUS

KRUPANIDHI GROUP OF INSTITUTIONS

12/1, Chikka Bellandur, Carmelaram Post Varthur Hobli, Off Sarjapur Rd, Bengaluru, Karnataka 560035

MASTER OF BUSINESS ADMINISTRATION [DAY] UNDER

CHOICE BASED CREDIT SYSTEM (CBCS)

(2014 - 2015 ONWARDS)

COURSE CONTENT OF THIRD SEMESTER

Principal/Director

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Bangalore - 560 035

CANARA BANK SCHOOL OF MANAGEMENT STUDIES,

BANGALORE UNIVERSITY, BANGALORE

COURSE MATRIX

THIRD SEMESTER

PAPER	SUBJECTS					
CORE SUB	JECTS					
3.1	STRATEGIC MANAGEMENT & CORPORATE GOVERNANCE					
3.2	PROJECTS AND OPERATIONS MANAGEMENT					
ELECTIVE	SUBJECTS					
3.3	FINANCE					
	3.3.1 INDIAN FINANCIAL SYSTEM					
	3.3.2 CORPORATE TAX PLANNING	AND MANAGEMENT				
	3.3.3 CORPORATE VALUATION AND RESTRUCTURING					
3.4	MARKETING					
	3.4.1 RETAILING MANAGEMENT AND SERVICES					
	3.4.2 CONSUMER BEHAVIOR\					
	3.4.3 RURAL AND AGRICULTURAL MARKETING					
3.5	HUMAN RESOURCES					
	3.5.1 LEARNING AND DEVELOPMENT					
	3.5.2 INDUSTRIAL AND EMPLOYEE RELATIONS					
	3.5.3 PERFORMANCE MANAGEMENT SYSTEM					
3.6	HEALTH CARE MANAGEMENT					
	3.6.1 PERSPECTIVES ON HEALTH CARE SECTOR					
	3.6.2 MANAGEMENT OF PUBLIC HEALTH SYSTEMS					
	3.6.3 HEALTH ECONOMICS					
3.7	BANKING FINANCE AND INSURANCE (BFIS)					
	3.7.1 STRATEGIC CREDIT MANAGEMENT IN BANKS					
	3.7.2 INSURANCE PLANNING & MANAGEMENT					
	3.7.3 INDIAN FINANCIAL SYSTEM					
3.8	STARTUPS AND SMEs MANAGEMENT					
	3.8.1 PERSPECTIVES ON STARTUPS AND SMEs					
	3.8.2 BASIC MANAGEMENT ASPECTS OF SMALL BUSINESS					
	3.8.3 ESTABLISHMENT OF SMEs					
OPEN ELE	ECTIVE					
3.9	MANAGEMENT PERSPECTIVES	(TO BE OFFERED TO OTHER PG				
	PROJECT WORK FOR 4 WEEKS	STUDENTS BY CBSMS UNDER CBCS				
3.10	(BETWEEN II & III SEMESTER)	SCHEME)				

3.1 STRATEGIC MANAGEMENT AND CORPORATE **GOVERNANCE**

1. GENERAL INFORMATION

No. of Credits per week No. of Hours per week

2. PERSPECTIVE OF THE COURSE

In today's economy, strategy plays an important role in gaining and sustaining a competitive advantage, which has become harder than ever . The syllabus captures the complexity of the current business environment and delivers the latest skills and strategic process adopted by companies, which will help students develop strategic prowess.

3. COURSE OBJECTIVES AND OUTCOMES

OBJECTIVES

- To enlighten the students with the concepts and practical applications of Strategic Management and Corporate Governance.
- To instill a comprehensive and step-wise understanding of the principles of strategy formulation and competitive analysis

OUTCOMES

- This course will equip the students with required skills of managerial decisions and actions.
- This will enable students to transfer conceptual learning to strategic application in their professional lives.

4. COURSE CONTENT AND STRUCTURE

MODULE 1: STRATEGY AND PROCESS

Historical perspective of Strategic management, Conceptual framework for the Conceptual framework framewor management, the Concept of Strategy and Strategy Formation Process - Stakeholders in business -Vision, Mission and Purpose - Business definition, Objectives and Goals.



UNIVERSITY

REGULATIONS, SCHEME AND SYLLABUS

For the course

MASTER OF COMPUTER APPLICATIONS (MCA)

I to VI Semesters

(Choice Based Credit System -Y2K14 Scheme)

Revised w.e.f.

Academic Year 2014-15 and onwards

MCA PROGRAMME JNANABHARATHI CAMPUS BANGALORE UNIVESITY, BANGALORE

SCHEME OF STUDY AND EXAMINATION FOR MASTER OF

COMPUTER APPLICATIONS (MCA)

MCA101T MCA102T	Problem Solving Techniques using C	Week 4	IA	Exam	Total	Subject	Sem
	Techniques using C	4				J	20111
MCA102T	A	7	30	70	100	4	
	Accounting and Financial Management	4	30	70	100	4	24
MCA103T	Digital Electronics and Microprocessor	4	30	70	100	4	
MCA104T	Discrete Mathematics	4	30	70	100	4	
MCA105P	C Programming Lab	8	30	70	100	4	
MCA106P	Accounting Lab	8	30	70	100	4	
MCA201T	Data Structures	4	30	70	100	4	
MCA202T	Database Management System	4	30	70	100	4	
MCA203T	Computer Networks	4	30	70	100	4	24
MCA204T	Operating System	4	30	70	100	4	24
MCA205P	Data Structures Lab	8	30	70	100	4	
MCA206P	DBMS Lab	8	30	70	100	4	
MCA301T	File Structures	4	30	70	100	4	
MCA302T	Object Oriented Analysis and Design using UML	4	30	70	100	4	
MCA303T	Theory of Computation	4	30	70	100	4	26
MCA304T	Statistical Analysis	4	30	70	100	4	
MCA305P	File Structures Lab	8	30	70	100	4	
MCA306P	Object Oriented Analysis and Design using UML Lab	8	30	70	100	4	
MCA307T	Soft Core – Quantitative, Teaching and Research Aptitude	3	30	70	100	2	
MCA401T	Advanced Java Programming	4	30	70	100	4	
MCA402T	Advanced Algorithms	4	30	70	100	4 res	7
MCA403T	Advanced Software Engineering	4	30	70	100	al/Birecto	26 utions
MCA404T	Quantitative Techniques	4	30	70	The state of the s	abelfalle at	HIL HO
	MCA106P MCA201T MCA201T MCA202T MCA203T MCA204T MCA205P MCA206P MCA301T MCA302T MCA302T MCA304T MCA304T MCA305P MCA306P MCA306P MCA306P MCA307T MCA401T MCA401T MCA402T MCA403T	MCA201T Data Structures MCA202T Database Management System MCA203T Computer Networks MCA204T Operating System MCA205P Data Structures Lab MCA206P DBMS Lab MCA301T File Structures MCA301T File Structures MCA302T Object Oriented Analysis and Design using UML MCA303T Theory of Computation MCA304T Statistical Analysis MCA305P File Structures Lab Object Oriented Analysis MCA305P File Structures Lab Object Oriented Analysis MCA306P and Design using UML Lab Soft Core – Quantitative, Teaching and Research Aptitude MCA401T Advanced Java Programming MCA402T Advanced Algorithms MCA403T Advanced Software Engineering	MCA106P Accounting Lab 8 MCA201T Data Structures 4 MCA202T Database Management System 4 MCA203T Computer Networks 4 MCA204T Operating System 4 MCA205P Data Structures Lab 8 MCA206P DBMS Lab 8 MCA301T File Structures 4 MCA301T File Structures 4 MCA302T Object Oriented Analysis and Design using UML 4 MCA303T Theory of Computation 4 MCA304T Statistical Analysis 4 MCA305P File Structures Lab 8 MCA306P File Structures Lab 8 MCA307T Theory of Computation 4 MCA306P Accounting Lab 8 MCA306P File Structures Lab 8 MCA306P Accounting Lab 8 MCA307T Accounting Lab 8 MCA307T Accounting Lab 8 MCA307T Accounting Lab 8 MCA307T Accounting Lab 8 MCA401T Accounting Lab 8 MCA401T Accounting Lab 8 MCA401T Accounting Lab 8 MCA402T Advanced Algorithms 4 MCA403T Advanced Software Engineering 4	MCA106P Accounting Lab 8 30 MCA201T Data Structures 4 30 MCA202T System 4 30 MCA203T Computer Networks 4 30 MCA204T Operating System 4 30 MCA204T Operating System 4 30 MCA206P Data Structures Lab 8 30 MCA206P DBMS Lab 8 30 MCA301T File Structures 4 30 MCA302T Object Oriented Analysis and Design using UML 4 30 MCA303T Theory of Computation 4 30 MCA304T Statistical Analysis 4 30 MCA304T Statistical Analysis 4 30 MCA304T Statistical Analysis 4 30 MCA306P File Structures Lab 8 30 MCA307T Teaching and Research 3 30 MCA307T Teaching and Research 3 30 Aptitude Advanced Java Programming 4 30 MCA401T Advanced Algorithms 4 30 MCA402T Advanced Algorithms 4 30 MCA403T Engineering 4 30 MCA404T Quantitative Techniques 4 30	MCA106P Accounting Lab 8 30 70 MCA201T Data Structures 4 30 70 MCA202T Database Management System 4 30 70 MCA203T Computer Networks 4 30 70 MCA204T Operating System 4 30 70 MCA205P Data Structures Lab 8 30 70 MCA206P DBMS Lab 8 30 70 MCA301T File Structures 4 30 70 MCA302T Object Oriented Analysis and Design using UML 4 30 70 MCA304T Statistical Analysis 4 30 70 MCA305P File Structures Lab 8 30 70 MCA306P Object Oriented Analysis and Design using UML Lab 8 30 70 MCA307T Teaching and Research Aptitude 3 30 70 MCA401T Advanced Java Programming 4 30 70 MCA402T <td>MCA106P Accounting Lab 8 30 70 100 MCA201T Data Structures 4 30 70 100 MCA202T Database Management System 4 30 70 100 MCA203T Computer Networks 4 30 70 100 MCA204T Operating System 4 30 70 100 MCA205P Data Structures Lab 8 30 70 100 MCA206P DBMS Lab 8 30 70 100 MCA301T File Structures 4 30 70 100 MCA302T Object Oriented Analysis and Design using UML 4 30 70 100 MCA303T Theory of Computation 4 30 70 100 MCA304T Statistical Analysis and Design using UML 8 30 70 100 MCA306P File Structures Lab 8 30 70 100 MCA306P Fore-Quantitative, Teaching and Resear</td> <td>MCA106P Accounting Lab 8 30 70 100 4 MCA201T Data Structures 4 30 70 100 4 MCA202T Database Management System 4 30 70 100 4 MCA203T Computer Networks 4 30 70 100 4 MCA204T Operating System 4 30 70 100 4 MCA205P Data Structures Lab 8 30 70 100 4 MCA206P DBMS Lab 8 30 70 100 4 MCA301T File Structures 4 30 70 100 4 MCA302T Object Oriented Analysis and Design using UML 4 30 70 100 4 MCA304T Statistical Analysis 4 30 70 100 4 MCA305P File Structures Lab 8 30 70 100 4 MCA306P Tacking and R</td>	MCA106P Accounting Lab 8 30 70 100 MCA201T Data Structures 4 30 70 100 MCA202T Database Management System 4 30 70 100 MCA203T Computer Networks 4 30 70 100 MCA204T Operating System 4 30 70 100 MCA205P Data Structures Lab 8 30 70 100 MCA206P DBMS Lab 8 30 70 100 MCA301T File Structures 4 30 70 100 MCA302T Object Oriented Analysis and Design using UML 4 30 70 100 MCA303T Theory of Computation 4 30 70 100 MCA304T Statistical Analysis and Design using UML 8 30 70 100 MCA306P File Structures Lab 8 30 70 100 MCA306P Fore-Quantitative, Teaching and Resear	MCA106P Accounting Lab 8 30 70 100 4 MCA201T Data Structures 4 30 70 100 4 MCA202T Database Management System 4 30 70 100 4 MCA203T Computer Networks 4 30 70 100 4 MCA204T Operating System 4 30 70 100 4 MCA205P Data Structures Lab 8 30 70 100 4 MCA206P DBMS Lab 8 30 70 100 4 MCA301T File Structures 4 30 70 100 4 MCA302T Object Oriented Analysis and Design using UML 4 30 70 100 4 MCA304T Statistical Analysis 4 30 70 100 4 MCA305P File Structures Lab 8 30 70 100 4 MCA306P Tacking and R

	MCA405P	Advanced Java Programming Lab	8	30	70	100	4	
	MCA406P	Advanced Algorithms	8	30	70	100	4	
		Lab						
	MCA407T	Soft Core – Soft Skills and Personality	3	30	70	100	2	
		Development						
V	MCA501T	Advanced Web Programming	4	30	70	100	4	
	MCA502T	Advanced Database Management Systems	4	30	70	100	4	
	MCA503T	Artificial Intelligence	4	30	70	100	4	24
	MCA504T	Open Elective	4	30	70	100	4 #	
	MCA505P	Advanced Web Programming Lab	8	30	70	100	4	
	MCA506P	Mini Project	8	30	70	100	4	
VI	MCA601T	Elective – I	4	30	70	100	4	
	MCA602T	Elective – II	4	30	70	100	4/	16
	MCA603P	Main Project	16	150	250	400	8	

Students have to choose any two Electives from the given list in the Sixth semester.

- 1. Software Testing
- 2. e-Governance
- 3. Data Mining
- 4. Big Data Analytics
- 5. Cloud Computing
- 6. Parallel Algorithms
- 7. Image processing
- 8. Mobile Computing
- 9. Compiler Design
- 10. TCP / IP
- 11. Storage Area Network
- 12. Multimedia Communication
- 13. Distributed Operating Systems

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FIRST SEMESTER MCA

MCA101T: PROBLEM SOLVING TECHNIQUES USING C

Total Teaching Hours: 52

No. of Hours / Week: 04

UNIT - I

Introduction to Programming Concepts: Software, Classification of Software, Modular Programming, Structured Programming, Algorithms and Flowcharts, Writing algorithms and drawing flowcharts for simple exercises. Overview of C Language: History of C, Character set, C tokens, Identifiers, Keywords, structure of C program, executing a C program. Constants, variables, data types, declaration of variables, declaration of storage classes, assigning values to variables defining symbolic constants, declaring a variable as constant, declaring a variable as volatile, overflow and underflow of data, Operators in C, Hierarchy of Operators, Expressions, Type Conversions and Library Functions.

UNIT – II

Managing Input and Output Operations: The scanf() & printf() functions for input and output operations, reading a character, writing a character, (the getchar() & putchar() functions), the address operator(&), formatted input and output using format specifiers, Writing simple complete C programs. Control Statements: Decision making with if statement, simple if statement, the if else statement, nesting of if else statements, the else If ladder, the switch statement, the?: operator, the goto statement, the break statement, programming examples. Loop Control Structures: The while statement, the do While statement, the for statement, nested loops, jumps in loops, the continue statement, programming examples.

UNIT – III

Functions: Function Definition, prototyping, types of functions, passing arguments to functions, Nested Functions, Recursive functions. Arrays: Declaring and Initializing, One Dimensional Arrays, Two Dimensional Arrays, Multi Dimensional Arrays - Passing arrays to functions. Strings: Declaring and Initializing strings, Operations on strings, Arrays of strings, passing strings to functions. Storage Classes - Automatic, External, Static and Register Variables.

UNIT – IV

Structures and Unions: Defining a structure, declaring structure variables, accessing structure members, structure initialization, copying and comparing structure variables, operations on individual members, array of structures, structures within structures, structures and functions, Unions, size of structures, bit fields, programming examples. Pointers: Understanding pointers, accessing the address space of a variable, declaring and initialization pointer variables, accessing a variable through its pointer, chain of pointers, pointer expressions, pointers and arrays, pointer and character strings, array of pointers, pointer as function arguments, functions returning pointers, pointers to functions, pointers and structures, programming examples

UNIT – V [10 Hours]

File Management in C: Defining and opening a file, closing a file, input/output operations on files, error handling during I/O operations, random access files, command line arguments, programming examples. Dynamic Memory Allocation: Dynamic memory allocation, allocating a block of memory: malloc, allocating multiple blocks of memory: calloc, releasing the used space: Free, altering the size of a block: realloc, programming examples. The Preprocessor: Introduction, macro substitution, files inclusion, compiler control directives, ANSI additions, programming exercises.

Reference

- 1. E. Balaguruswamy, "Programming in ANSI C", 4th Edition, TMH Publications, 2007.
- 2. Ashok N. Kamthane, "Programming with ANSI and Turbo C", Pearson Education, 2006.
- 3. Mahapatra, "Thinking In C", PHI Publications, 1998.
- 4. Yashwant Kanetkar, "Let Us C", 13th Edition, PHP, 2013.

MCA303T: THEORY OF COMPUTATION

Total Teaching Hours: 52

No. of Hours / Week: 04

[12 Hours]

UNIT – I

Review of Mathematical Terms and Theory: Basic Mathematical Notations and Set Theory, Logic Functions and Relations, Language Definitions, Mathematical Inductions and Recursive Definitions. Finite Automata: Deterministic and Non Deterministic Finite Automata, U-Transitions, Conversion from NFA to DGA, Kleene's Theorem, Regular and Non Regular Languages.

UNIT – II

Context Free Grammar: Introduction to CFG, CFG and Known Languages, Unions, Concatenations and *'s Notations and CFL, Derivatives of Trees and Ambiguity and Unambiguous CFG and Algebraic Expressions, Normal Forms and Simplified Forms. Pushdown Automata, CFL and NFL: Introduction to PDA, Definition, DPDA, PDA Corresponding to CFG, CFG Corresponding to PDA, Introduction to CFL, Intersections and Complements of CFL, Decisions Problems and CFL.

UNIT – III [10 Hours]

Turing Machines, Recursive Language: Model of Computation and Church Turning Thesis, Definitions of Turing Machine, TM and Language Acceptors, Variations of TM, Non Deterministic TM, Universal TM, Enumerable and Language, Recursive and Non Recursive Enumerable.

UNIT – IV [10 Hours]

Computation Functions, Measuring, Classifications And Complexity: Primitive Recursive Functions, Halting Problem, Recursive Predicates and Some Bounded Operations, Unbounded Minimizations and μ -Recursive Functions, Godel Numbering, Computable Functions and μ -Recursive, Numerical Functions.

UNIT – V [10 Hours]

Tractable and Intractable Problems: Growth Rate and Functions, Time and Speed Complexity, Complexity Classes, Tractable and Possibly Intractable Problems, P and Np Completeness, Reduction of Time, Cook's Theorem, Np-Complete Problems.

Reference

- 1. John E. Hopcroft, Rajeev Motwani, Jeffrey D.Ullman, "Introduction to Automata Theory, Languages and Computation", 3rd Edition, Pearson Education, 2011.
- 2. John C Martin, "Introduction to Languages and Automata Theory", 3rd Edition, Tata McGraw-Hill, 2007.
- 3. Daniel I.A. Cohen, "Introduction to Computer Theory", 2nd Edition, John Wiley and Sons, 2009.
- 4. Thomas A. Sudkamp, "An Introduction to the Theory of Computer Science, Languages and Machines", 3rd Edition, Pearson Education, 2006.

MASTER OF BUSINESS ADMINISTRATION UNDER CHOICE BASED CREDIT SYSTEM (CBCS)

(2014 - 2015 ONWARDS)

COURSE CONTENT OF FIRST SEMESTER

CANARA BANK SCHOOL OF MANAGEMENT STUDIES,

BANGALORE UNIVERSITY, BANGALORE

1.1 ECONOMICS FOR MANAGERS

1. GENERAL INFORMATION

Credits	4	
Hours per week	4	

2. PERSPECTIVE OF THE COURSE

This course is designed to impart knowledge of the concepts and principles of Economics, which govern the functioning of a firm/organization under different market conditions. It further aims at enhancing the understanding capabilities of students about macroeconomic principles and decision making by business and government.

3. COURSE OBJECTIVES AND OUTCOMES

OBJECTIVES

- To make the students aware of the various economic theories and principles
- To equip them with the required tools and techniques for improving their decision-making skills.

OUTCOMES

- The student must have micro and macro-economic perspective to understand the under pinning of management.

4. COURSE CONTENT AND STRUCTURE

MODULE ONE: INTRODUCTION TO MANAGERIAL ECONOMICS

8 HOURS

Introduction to Economics, Kinds of Economic Decisions, Significance and applicability of Managerial Economics in decision making, Role and responsibilities of Managerial Economics, Economic principles relevant to managerial decision making, Opportunity